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PSEUDOXANTHOMA ELASTICUM (GRONBLAD-STRANDBERG DISEASE) WITH CORONARY ARTERY CALCIFICATION

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The literature on pseudoxanthoma elasticum (PXE) has recently been well reviewed.[1,2] The purpose of this paper is to describe a case of PXE in a female aged 31, showing the unusual features of calcification of the coronary arteries and falx cerebri and flushing of the cutaneous lesion associated with the episodes of haematemesis.

The fundamental defect in PXE is a degeneration of collagen fibres throughout the body. Degeneration of collagen fibres in the media of the muscular arteries has been shown in the limb, coronary, renal, pancreatic, uterine, cutaneous, mesentric, carotid, thyroid and choroid-plexus arteries. Calcification of the degenerated material in some of these sites has been demonstrated. Superimposed advanced and premature atherosclerosis and arteriosclerosis occurs in all the arteries. In the skin there is fragmentation of collagen fibres in the deeper and middle zones of the corium. Histological calcification of the degenerated material in the skin also occurs. In the eyes degeneration and tears in the lamina elastica of Bruch's membrane of the choroid appears to be the basis of the angioid streaking. Colloid bodies, choroidoretinitis and fundal arteriosclerosis have been described.

Although vascular calcification has been well documented, as far as we are aware there is no previously described case of calcification of the coronary arteries or falx cerebri in this disease.

CASE HISTORY

European female, aged 31. At the age of 10, a skin condition appeared in the neck, axillae, groins and popliteal and antecubital fossae. The condition has persisted and slowly progressed.

At the ages of 15, 16 and 29 she had fairly severe haematemeses. Barium meal and oesophagoscopy have repeatedly been negative. At the age of 30, she had a 4th haematemesis. During this haematemesis, the rash in the groins became bright red for 10 days and then faded. A 5th haematemesis occurred when she was 31. Three days before this haematemesis a well-marked flush, which lasted for a few hours, appeared between the 'xanthomatous' plaques in the groins and collar area.

Since the age of 12, she has had typical migraine headaches occurring about 7–10 times each year. For 4 years she has had mild intermittent claudication in both calves. There is no history of angina pectoris.

Family History. Her brother aged 34 has had a similar condition since the age of 3. His skin lesions are very extensive. There has never been gastro-intestinal bleeding. He has recently had a coronary thrombosis from which he has recovered.

On Examination

There are typical PXE lesions in the collar area of her neck, in the groin, and in the popliteal and antecubital areas. There is a similar lesion inside the lower lip (Fig. 2). The skin lesions are crepe-like, raised, yellowish, flat papules 1–3 mm. in diameter on an erythematous skin base (Fig. 3). We found that rubbing or stretching the skin made the skin lesions more prominent. In the areas affected the skin is easily stretched, redundant and lax (Fig. 4), and the folds in the axilla are excessive (Fig. 5).

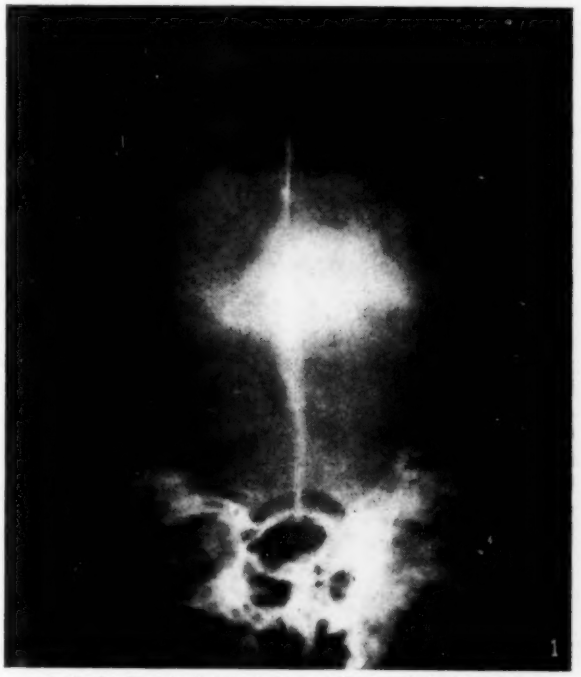

Fig. 1. Radiograph of skull, showing calcification of the falx cerebri.

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The radial pulses are felt with difficulty. Blood pressure in the brachial artery 130/80 mm. Hg. Neither the dorsalis pedis nor the posterior tibial arteries are palpable. The femoral and popliteal pulses are present and there is no delay.

There are typical angioid streaks in the fundi. The fundal arteries and maculae are normal. Visual acuity and visual fields are normal. On physical examination there are no cardiac or neurological abnormalities.

Radiography. The X-ray of the skull shows well-marked calcification of the falx cerebri (Fig. 1). The pineal gland is calcified and normal in situation. There is an area of calcification, slightly larger than the pineal, seen in the lateral view which lies on the same horizontal plane as the pineal and appears to be in the choroid plexus. In addition there is a small annular calcific shadow in the fronto-occipital view suggesting calcification of the right internal carotid artery. The left anterior oblique radiograph of heart shows calcification of the posterior descending branch of the right coronary and possibly the circumflex branches of the left coronary artery (Figs. 6(*a*) and 6(*b*)). There is also calcification along the major length of both femoral and post-tibial arteries. X-ray of the gastro-intestinal tract has repeatedly failed to reveal any cause for the bleeding.

On plethysmographic examination of the lower limbs there is grossly diminished pulsation, diminished response to body heating, and venous occlusion in the vessels supplying the big toes.

Skin biopsy shows typical features of pseudoxanthoma elasticum.

DISCUSSION

This patient presents the classical features of PXE. There are lesions in the skin, fundus oculi, and cardiovascular system. She also illustrates the familial incidence.[1,3] A preponderance of females has also been noted.[1,3]

Her presenting symptom on 4 occasions has been haematemesis. As is usual in this condition, barium meals failed to reveal any abnormality. The haematemesis is a local manifestation of the widespread vascular involvement. It is frequently severe and may be fatal.[4]

The patient's skin lesions are typical in their appearance,

Fig. 2. Buccal mucosa of lower lip, showing typical crepe-like lesion of pseudoxanthoma elasticum. *Fig.* 3. Left side of neck showing the typical lesion. *Fig.* 4. Abnormal laxity of skin of the affected area of neck. *Fig.* 5. Excessive folds of lax skin of left axilla. *Fig.* 6a & 6b. Left anterior oblique radiographs of heart showing calcification of posterior descending branch of right coronary artery, and possibly the circumflex branch of the left coronary artery.

site and histology. The soft intradermal yellow crepe-like plaques on a slightly erythematous base conform in all respect to Chauffard's classical description.[5]

Flushing of the skin in the affected areas occurred during the episodes of haematemesis. This phenomenon, to our knowledge, has not been described since Chauffard's original reference to it. He described an episode of flushing in which there appeared violacous rose networks which were not elevated and formed a congested halo around the yellow plaques; but he does not mention the relationship of this flushing to haematemesis. The flushing in our case was directly related to haematemesis and we suggest may serve as a premonitory sign of gastro-intestinal bleeding.

We found that rubbing the affected areas and at the same time slightly stretching the very lax skin, which is present in this disease, made the lesions much more obvious.

Fundoscopy showed typical angioid streaking, but no choroidoretinitis or other changes that have previously been described.[6,7]

There were symptoms of arterial insufficiency in the legs, weak or absent peripheral pulses, gross plethysmographic abnormalities, and radiological vascular calcification. These findings are in keeping with previously described vascular calcification in the peripheral arteries of the arms and legs,[1, 2, 7] and in the choroid plexus[8] and internal carotid artery[9]. In our case well-marked calcification was shown in both femoral and post-tibial arteries, in the left internal carotid artery and the choroid plexus.

There was calcification of the falx cerebri; the calcification presumably occurring in the collagen tissue present in this structure. Calcification of this structure does of course occur in normal people.

The calcification in the coronary arteries is a unique feature in this case and, as far as we are aware, has not been previously described. In spite of radiological evidence of gross calcifications there were no symptoms of coronary insufficiency and the electrocardiograph was normal. Coronary insufficiency and increased incidence of hypertension has been reported in PXE.[1, 2, 7] The typical arterial collagen degeneration of PXE has been shown in the coronary arteries by numerous workers but there is no report of calcification radiologically or histologically, either in the heart or coronary arteries. Whitish plaques on the atrial and ventricular endocardium and pericardium is well documented[2] but these were not calcified.

SUMMARY

1. A typical case of PXE pseudoxanthoma elasticum is reported.

2. As far as we are aware radiological calcification of the coronary arteries and falx cerebri are described in this condition for the first time.

3. It is shown that the skin lesions are made more prominent by rubbing.

4. Attention is drawn to flushing of the skin associated with the episodes of haematemesis.

5. The term 'crepe-like' is suggested as a good descriptive term for the skin lesions.

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VAN DIE REDAKSIE

GEESTESONGESTELDHEID IN SUID-AFRIKA

As 'n mens vandag in Suid-Afrika aan die een of ander vorm van geestesongesteldheid ly, is jy swakker daaraan toe as wanneer enige ander siekte jou tref. Daar bestaan inderdaad 'n noodtoestand op hierdie gebied. Die ironie van die saak lê egter daarin dat geestesongesteldheid méér mense aantas as die belangrikste ander siektes tesame. Goed die helfte van die pasiënte wat gewoonweg by dokters se spreekkamers opdaag, toon simptome van emosionele versteuring. Die bedreiging wat geestessiekte inhou, is dus geen hersinskim nie. Dit is 'n dringende werklikheid waarmee elke verantwoordelike mens, en veral elke dokter, rekening moet hou.

Die ironie van die saak word verder verhoog deur die feit dat daar vandag vir die meeste vorms van geestessiekte doeltreffende behandelingsmetodes bestaan. As gevolg van die noodstoestand wat bestaan, bly hierdie vorms van behandeling egter buite die bereik van die meeste mense wat dit nodig het.

Behandeling deur 'n private psigiater word gekompliseer deur die feit dat die verblyf in 'n private inrigting dikwels betreklik langdurig is en om hierdie rede baie duur word. Ook kan psigiaters hoogstens met die ernstiger gevalle handel. Daar is verreweg nie genoeg psigiaters beskikbaar vir almal wat emosionele moeilikhede het nie. En die gesinsgeneesheer is dikwels òf te besig òf hy voel dat hy nie genoeg kennis dra van die hantering van hierdie soort probleme nie.

Persone wat werklik aan die een of ander vorm van ernstige geestesversteurdheid ly, kan toegelaat word tot een van die 10 regeringshospitale vir geestessiektes—as daar vir hulle plek is. As so 'n persoon 'n blanke vrou is, of 'n nie-blanke man of vrou, sal daar 9 uit die 10 keer nie plek wees in een van dié hospitale nie. Al die regeringshospitale is oorvol. Die goeie fasiliteite wat hulle wel bied, word gekortwiek deur gebrek aan ruimte en 'n nypende tekort aan mediese beamptes en verplegingspersoneel.

In 1956 was daar naastenby 19,000 pasiënte (van alle rasse) in die regeringshospitale. Dit is waarskynlik dat daar in dieselfde jaar altesaam ongeveer 50,000 geestesversteurde pasiënte in die land was. 'n Groot aantal—die meeste—pasiënte is dus in private inrigtings of in die samelewing self versorg.

Omdat daar meermale 'n ernstige noodsituasie ontstaan het wanneer daar vir 'n geestesversteurde persoon geen plek in 'n inrigting te vinde was nie, is so 'n persoon soms ten einde raad na 'n gevangenis gestuur. Dit is 'n maatreël wat 'n mens met ontsetting vervul, maar dit was tog *een* manier om 'n haas onoorkomelike probleem die hoof te bied. Vandag is selfs hierdie uitweg gesluit. Die gevangenisowerhede het 'n opdrag uitgereik dat geestesversteurde pasiënte nie tot die tronke toegelaat mag word nie, tensy daar 'n aanklag teen hulle is. Provinsiale hospitale word ook nie toegelaat om geestesversteurde persone toe te laat nie. Die gevolg is dat daar vir baie ernstige gevalle van geestessiekte letterlik geen heenkome is nie.

Vir persone wat aan ernstige neurotiese toestande ly, is daar in die land net een provinsiale hospitaal waar hulle behandel kan word: die Tarahospitaal in Johannesburg wat onder die provinsiale administrasie van die Transvaal resorteer. Daar is wel ook private inrigtings waar pasiënte van hierdie aard behandel kan word, maar die behoefte aan meer provinsiale inrigtings soos Tara is uiters dringend. Persone wat aan die een of ander vorm van neurose ly, kan wel tot die regeringshospitale vir geestessiekes toegelaat word as vrywillige pasiënte, maar dié hospitale is nie in die eerste plek ingestel op dergelike pasiënte nie.

Wat swaksinnige persone betref, dit wil sê persone van wie die verstandsgebrek sodanig is dat hulle nie na hulself of hul sake kan kyk nie, sou dit 'n konservatiewe beraming wees om te sê dat daar ongeveer 100,000 sulke persone (van alle rasse) in die land is. Van hulle was in 1956 skaars 4,000 op die registers van die 3 regeringsinrigtings wat vir sulke persone bestaan. Die oorgrote meerderheid van laegraadse, sertifiseerbare, swaksinnige persone in ons land word dus in die gemeenskap self versorg. Die 3 staatsinrigtings, waarna ons verwys het, is uitsluitend vir blankes. Vir nie-blanke swaksinniges bestaan daar tot nog toe geen staatsinrigting nie.

Dit is ook 'n vraagstuk met verreikende implikasies. Swaksinnige persone in die samelewing vorm weens hul verstandelike en temperamentele tekortkominge, dikwels 'n potensiële bron van misdadigers van allerlei aard. As sodanig is hulle 'n bron van spanning en las in die gesinslewe en in die samelewing as geheel. Gruweloortredings, soos byvoorbeeld verkragting van jong kinders en van baie ou mense, word dikwels deur swaksinniges en psigopate gepleeg.

In hierdie noodsituasie wat ten opsigte van die versorging en behandeling van geestesongesteldes ontstaan het, is daar één organisasie wat in die bresse getree het. Dit is die Vereniging vir Geestesgesondheid. Hierdie Vereniging bestaan al sedert 1918 en hy het takke in die 10 grootste stede van die land. Hierdie takke reël klinieke wat deur psigiaters waargeneem word, en waar pasiënte van allerlei aard ondersoek word met betrekking tot enige soort geestesongesteldheid. Die werk van die takke word egter ook gestrem deurdat hulle hoofsaaklik sorteersentrums is en geen behandelingsklinieke het nie. Ook moet die Vereniging die grootste deel van sy lopende uitgawes uit liefdadigheidsbronne vind, aangesien die subsidie wat van 'n Unie-departement ontvang word, lank nie genoeg is om al die uitgawes te dek nie.

Omdat 'n beskaafde land, onder andere, ook geken word aan hoe hy vir sy geestesongesteldes sorg, moet daar dringend iets aan hierdie saak in ons land gedoen word. En die antwoord op hierdie probleem moet sowel uit die geledere van die grotere publiek kom, as uit die geledere van die mediese professie self. Wat die algemene publiek betref, het die tyd aangebreek dat elke verantwoordelike persoon in Suid-Afrika die erns van die situasie ten opsigte van geestesongesteldheid insien. As jong en nog grotendeels onontgonne land, kan ons dit eenvoudig nie bekostig om soveel

onverbruikte werkkragte onproduktief verlore te sien gaan nie. Soos die publiek van Suid-Afrika saamgestaan het om die bedreiging van tering die hoof te bied, sal hulle weer moet saamstaan om die bedreiging van geestessiekte af te weer.

En wat die mediese professie betref, sou dit waarskynlik nodig wees om die saak by sy wortels aan te pak. Sou dit te veel wees om te sê dat 'n ingrypende verandering teweeggebring moet word ten opsigte van die opleiding van mediese studente op hierdie gebied? Die sielkunde en die psigiatrie was nog altyd afskeepvakkies aan die meeste van ons mediese skole. Hierdie toestand van sake moet radikaal verander word. Die gewone dokter as algemene praktisyn is by uitstek die man wat uitgerus moet wees om die probleem van geestesongesteldheid in al sy vertakkings te kan hanteer, want dan sal hy—die algemene praktisyn—weer word wat hy bedoel is om te wees: die voog, nie net van die liggaamlike welstand van die gemeenskap nie, maar ook van sy psigiese welstand.

Ons leef in 'n tyd wat bo alles gekenmerk word deur ongekende spanning en drukte in haas alle lewensfere. En die atoomeeu het ons skielik tot die besef gebring dat die suksesvolle hantering van die probleem van menslike verhoudings op die persoonlike, nasionale en internasionale vlakke, en op die basis van 'n kerngesonde geestesgesteldheid, 'n onontbeerlike vereiste vir die voortbestaan van ons beskawing is. Dit is die uitdaging waarvoor die moderne sosiale medisyne te staan gekom het.

EDITORIAL

PSYCHOSOMIMETIC AGENTS

It has been known for centuries that man's behaviour can be altered by drugs. Both acute and chronic psychotic states can be produced by a number of central nervous depressants, stimulants, analgesics, autonomic drugs like atropine and hyoscine, cocaine, and numerous others including quinine and mepacrine, arsenic and mercury, thyroid, and so on. Especially in recent years, by the administration of a variety of drugs and by other procedures experimental psychiatrists have sought to produce 'model' psychoses in animals and man that might shed some light on conditions such as schizophrenia.[1] Many of the methods used in animals have not been suitable for human experimentation, and much study has therefore been made on alterations in behaviour encountered in the course of treatment or during research on other problems.

The administration of LSD 25 (lysergic acid diethylamide) or of mescaline has been much used to produce 'model' psychoses, particularly for exploring the aetiology of schizophrenia. No simple relationship appears to exist between 'clinical' and 'model' psychoses but some features common to both are likely to be elucidated.

The discovery of the mental effects of LSD 25 and an account of the symptomatology have received wide publicity in medical journals since the first descriptions by Stohl in 1943 in Swiss literature; later in the English language by such workers as De Shon *et al.*,[2] Osmond and Smythies,[3] Hoch *et al.*,[4] Isbell *et al.*,[5] and Hurst *et al.*[6] As originally recounted by Stohl the ingestion of LSD 25 (usually 30 micrograms) produced symptoms in about ½ hour which reached a peak in 1½ hours and completely disappeared by the end of 8 hours. At first such features were noted as atoxia, dysarthria, tremor, nausea, headache, palpitations, conjunctival injection, sweating, and deepening of respiration; i.e. of a motor and autonomic nature. Later there were marked disturbances of perception; visual hallucinations were prominent with a variety of scintillations and geometric patterns varying in design and colour and often grotesque in nature. Insight was retained throughout regarding these unreal phenomena. Illusions were common, also disturbances of taste, and of tactile and deep sensibility. Consciousness was never seriously disturbed. There is a general resemblance in the LSD-25 syndrome to that produced by mescaline, cannabis, and cocaine. In the different descriptions given by various investigators it is necessary to take into account such factors as dosage, environmental conditions, type of subject, and the object of the observers in making the investigation. However, by studies of this nature some relationship may become established between the clinical effects produced by these drugs and their mechanisms of action.

Much remains to be learned about the biochemical mechanisms of action of drugs used in psychiatry. Cerebral glycolysis and oxidation may be affected and other metabolic processes which are still obscure. Very little is known about 'physical' action apart from metabolic action on neural activity,[7] and in addition to such mechanisms others of neurophysiological and psychological type may contribute to the total pattern of drug modification of behaviour. There are already numerous reports on the neurophysiological actions of psychosomimetic drugs on the electrical activity of the cerebral cortex, the long sensory pathways and the projection systems. They can profoundly affect the patterns of afferent impulses passing to the cortex, thus altering mental and motor output. Neurophysiological findings have, however, not yet been sufficient to detect the many variables influencing human behaviour.

As emphasized by Wikler,[8] it matters little whether 'model' psychoses resemble schizophrenia. The use of drugs as tools to detect and manipulate the biochemical, physiological and psychological variables of cerebral function will make it more possible to develop concepts about the dynamic processes underlying normal or abnormal behaviour. Psychiatrists and pharmacologists will need to embark on a joint effort in searching for 'pattern-specificity' of drug action, which may reveal common denominators upon which they act, and so provide a means for studying theories of behaviour. In this way progress may be made in the clinic and the laboratory.

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NUTRITIONAL SCIENCE AND PRACTICAL DIETETICS*

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The study of nutritional science may be firstly an end in itself; that is, it may be part of the search for knowledge for its own sake. Secondly, nutrition may be studied scientifically in order to assist the farmer in getting the best yield for his investment of capital and labour; in other words it may be part of the study of agricultural and veterinary practice. Thirdly, the discoveries of nutritional science may be applied to the practice of curative and preventive medicine; that is it may be part of medical science and practice. In this objective practical dietetics becomes an important vehicle of application.

In South Africa at least the application of nutritional science to agricultural and veterinary science got a start of two or three decades on its application to medical science and preventive medicine in the human being. In the late 1930s, when the South African Nutrition Council had its inception, the statement became a *cliché* that far more money and thought and work had been put into methods of feeding cattle, sheep and poultry than had been put into improvement of the diet of the South African population. This statement was undoubtedly correct and it is interesting and instructive to analyse the reasons for the paradox.

To begin with, the Onderstepoort Veterinary Research Station was already known in many parts of the world while the South African medical schools were still in their infancy. The personnel of the Union Government's excellent veterinary service were largely trained at Onderstepoort and they constantly brought or sent back to Onderstepoort the problems with which they were faced in the field; many of these were related to animal nutrition, and the problems presented to the staff of Onderstepoort stimulated a large body of fruitful research in animal nutrition.

NUTRITION IN MEDICINE THIRTY YEARS AGO

On the other hand the majority of medical practitioners in the country and a large part of the staff of the South African medical schools had been trained in Britain or Western Europe in an era when applied human nutrition received scant notice in medical education. I was fortunate in receiving my training in the pre-medical sciences in that remarkable school of animal physiology headed by Sir Charles Sherrington in the University of Oxford. This school included a department of biochemistry headed by Sir Rudolph Peters. I recall the personal demonstration, by Peters himself to the class of my year, of the dramatic correction in a few moments of the head retraction and paralysis in the B1-deficient pigeon by the injection of thiamine. My education in physiology in Oxford included *mirabile dictu* a visit with my tutor to the school of biochemistry headed by Sir Gowland Hopkins at Cambridge. Nutritional science was dominated at that time by vitaminology, and vitamins constituted a considerable part of my physiological thinking even in the Oxford school which, under Sherrington, was understandably orientated principally towards neurophysiology. Of course vitamins were considered against a background of protein, fats, carbohydrates and calories. We talked about first-class protein and second-class protein and knew that proteins were broken down in the gastro-intestinal tract through polypeptides to amino acids. But even though vitamin fortification of foodstuffs and vitamin therapy in medicine were familiar ideas, I cannot remember anybody even thinking about the possibility of improving the biological value of second-class proteins by fortification with synthetic amino acids. Fats were just fats but I can recall clearly being intrigued at the time by the earliest reports on the roll of essential fatty acids and thinking that this should be a fascinating and fruitful subject for research. That idea, however, went to bed in my mind until 30 years later, when work initiated in my own department by Dr. B. Bronte-Stewart helped to bring quite suddenly a new interest in the possible role of essential fatty-acid deficiency in human disease. On the other hand I did see clearly at that early stage one wrong trend which we have not yet put right. In an essay on protein requirements I criticized the unjustified conclusion that because C. Voit had found that the average German working man consumed approximately 118 g. of protein per day this must be the human requirement for protein. Nutritionists today however are still making the same type of error, perhaps most noticeably in recent years in the American recommendation of 75 mg. of ascorbic acid per day.

The salt composition of the body was studied and it was recognized that there were trace elements detectable by the spectrograph which might have some functional significance. The modern interest in trace elements as essential components of enzyme systems was, however, not even contemplated.

While I was studying nutritional science as part of my physiology at Oxford the principles of nutritional physiology were being applied, particularly under the influence of Onderstepoort, to the production of better milk yields in cows, of better egg-laying in hens, and of quicker growth in piglets, while *styfsiekte* had already been abolished by the recognition of phosphorus deficiency in pastures as its cause and its correction by artificial phosphates or bone meal. From Oxford I went for my clinical training to the London Hospital. I suppose that 'The London' was as well orientated towards dietetics in medicine as any English medical school because it had on its staff that redoubtable figure Robert Hutchison, who recently wrote the foreword to the 13th edition of the book on dietetics which he had first published 51 years before. Certainly we were lectured on dietetics by this lugubrious-looking but remarkably entertaining Scot. The London had a metabolism ward in which diabetes, osteomalacia and other disorders were studied and dietetic principles applied to the correction of illness. But I never heard any talk about applying nutritional science to the prevention of disease or to the achievement of good and lasting health except in the sphere of infant feeding. Apparently the contents of the baby's bottle were important to its welfare: certainly it might require orange juice, cod liver oil, and perhaps some iron, to tide it through to the period of mixed feeding, but after that it was tacitly assumed that, at least among the privileged, appetite would lead to good nutrition except in rare instances of anorexia nervosa. These deficiencies in the clinical educa-

* An address to the first annual general meeting of the Nutrition Society of Southern Africa.

tion of my generation of medical students in London have doubtless long since been corrected but old traditions of thought die hard. I recently reviewed that truly remarkable book 'The Diseases of Occupations' by Donald Hunter, a London Hospital physician. I owe very much to my late chief in stimulus and in enthusiasm; I recall his talking to us as students about the sound of cattle 'crunching bones on the South African veld' before I, a South African, had heard of aphosphorosis or *styfsiekte*. In spite of my admiration for him and for his book I was constrained to point out in my review that the word 'nutrition' appears on only one page of the index and the words 'food' and 'diet' do not appear at all. I pointed out that in South Africa and in many parts of the world malnutrition is the greatest and most easily preventible occupational hazard, being a hazard of migrant labour.

Invalid Dietetics

In those days dietetics in medical education consisted in the use of invalid foods and invalid diets. Many of the latter were applied then, and even until quite recently, without any appreciation of the requirements for the maintenance of nutrition. The Sippy diet, for example, was applied for decades to the treatment of peptic ulcer although it was calorically deficient and nutritionally unbalanced. Avitaminoses reproduced by diabetic diets were prevalent, while convalescent pulmonary tuberculotics struggled around under a great mound of obesity produced by applying the calorie requirements of an active labourer to a man lying recumbant in bed for six months or a year. So prolonged was the hold of the Sippy diet that Meuelengracht of Copenhagen was constrained to break its caloric and nutritional inadequacy by a quite unnecessary swing of the pendulum to minced beefsteak for immediate application, by force if necessary, to the management of haematemesis.

Reasons for Neglect of Human Nutrition

1. *Simplicity of Objective*. Why was nutritional science so neglected by the medical profession when its importance was so clearly recognized by veterinarians? Why were the principles of dietetics in medical practice applied only to infant feeding and with such absurd perversions to invalid diets? Why did the veterinarians teach the farmer that it was worth while to feed his animals properly while medical educators thought the subject unworthy of discussion? Undoubtedly part of the answer lies in the comparative simplicity of objectives in animal husbandry. The farmer knows what he wants. In his cow he wants better milk production over a longer period without undermining of health. From his hen he wants a daily egg for a longer period of days, from his pigs and poultry he wants growth to marketable size in the shortest period of time. His objectives are indeed simple. Who can say on the other hand what is the objective of human feeding? Stated in general terms, it should presumably ensure optimum growth and development, maximum resistance to wear and tear and infection, and maximum life expectation. Certainly none of these desirable objectives should be limited by insufficient or by ill-balanced food, but can these general objectives be translated into practical diets in widely different regions of the world and to widely differing tastes? To civilized peoples eating is more than the satisfaction of hunger and supply of bodily needs; it is also a social grace. If all healthy foods are provided to satisfy demand can the appetite be regarded as a reliable guide? Unfortunately the prevalence of gluttony and obesity suggests that appetite is not a reliable guide. The culinary art and the enterprise of food technologists have so transformed the appearance and taste of natural foodstuffs that appetite has lost its path as a guide to health; so public education in health and nutrition is a definite necessity. In this the dietitians have their most valuable opportunity.

2. *Curative Orientation*. But it is doubtful whether the comparative simplicity of objectives was the whole reason for the greater application of nutritional principles to animal than to human nutrition. Another reason is that medical education was still largely curative rather than preventive in its orientation. The patient paid his doctor to diagnose and cure his malady, not to prevent disease. The farmer on the other hand looked to the veterinarian for guidance in health promotion in his herds; except with a stud animal it was easier and cheaper to kill the sick beast than to try to cure it.

THE NINETEEN-THIRTIES

Minimum Requirements and Recommended Allowances

At the time between the first and second world wars, when the application of nutritional principles to disease prevention and health promotion was still largely neglected by practising physicians, there were far-sighted pioneers who saw its value. Sir John (afterwards Lord) Boyd Orr was one; Sherman and Rose were notable in the United States.

The interest among nutritional physiologists and those concerned with health promotion led to the study of minimum requirements and the laying down of recommended allowances. The latter were supposed to provide a margin of safety between actual intake and minimum requirement which would be adequate for the common stresses. The margin was usually set fairly wide, seldom less than 50% in excess of minimum requirement. This was done on the principle that, at least for vitamins, minerals and essential amino acids, it was better to give too much rather than too little. This margin of safety need not be criticised provided the minimum standard really was a minimum. Unfortunately the setting of the minimum standards and recommended allowances were sometimes based on two principles which will not bear critical analysis, viz. (1) that the amount required to establish equilibrium in a balance experiment is the minimum or desirable requirement, and (2) that because healthy well-nourished people in a privileged community chose to eat enough of a nutrient to achieve equilibrium their choice indicates a requirement of some sort. The acceptance of the latter principle in relation to protein requirements 50 years or more ago has already been criticized. Its counterpart in the 1930s led to the setting of recommended intakes of calcium and ascorbic acid which most of us feel today were unnecessarily high. Nevertheless these recommendations have doughty supporters. I was present at a meeting of the Food and Nutrition Board in Washington, USA when a very influential sub-committee moved to reduce the recommendation for ascorbic acid from 75 to 50 mg. per day for adults. Although the sub-committee's report was unanimous it was challenged so vigorously and with such impassioned oratory by one member of the Board that the reduction was rejected. I was informed that a similar reduction in the recommendation for calcium would probably meet with a similar rejection.

This attitude was undoubtedly a by-product of the American 'era of plenty' to which I shall shortly refer. In the case of calcium there is little doubt that efforts to implement the recommendation by nutrition educationists and dietitians led to the phenomenal consumption of milk and dairy products by adults in the USA—a trend which almost certainly in turn led to the very high fat/calorie ratio of modern American diets. I well remember an episode which I observed in a Washington Club: A young couple were evidently celebrating an anniversary (a baby-sitter had doubtless been engaged). After a good dinner and a bottle of wine I was horrified to see them order a glass of milk each (shades of the French wine industry)! It made me feel nauseated!

The Rise of Dietitions

The 1930s also saw the rise, although not the beginning, of the dietitians. They had been trained and employed for managing special diets and therapeutic menus in hospitals. But as recommended allowances appeared they were required more and more for interpreting these allowances into food purchases for many types of institutions. They have served in this respect a most valuable function and the need for their services is likely to increase steadily, or even rapidly, now that clinicians are belatedly accepting the importance of nutrition research for medical progress.

Food Industry

In the same decade before World War II, Food Industry, particularly in the USA, was awakening to the possibility of sales promotion by health education and was beginning to expend its huge profits in research. These profits doubtless derived from the need for simplification in cooking as domestic servants became scarcer and scarcer under the influence of America's enlightened application of education to the masses and of her expanding economy. The American housewife came home to her apartment after a day's work and wanted to be able to get dinner on the table without the tedious chores of the kitchen. She had to get her children off to school and her husband and herself off to factory or office with a comfortable stomach and an early start. Out of these needs the ingenuity of sales promoters evolved the processed, pre-cooked and packaged foods—the breakfast cereals, the pre-cooked oatmeal and the frozen orange juice for breakfast and the tenderized boned steak, frozen vegetables and choice ice cream for dinner. With a huge population, a rapidly expanding economy and enterprising advertising these developments began to lead to vast profits and stern competition. Advertising agents began to comb the nutrition files and badger research workers for advertising copy. What could be better copy than 'food for health'. The American family drooling over the luscious colour pictures of food in their magazines was told that all these attractive things were healthy. The era of 'Popeye the Sailor Man' had come and by the time more critical minds had debunked the alleged special virtues of spinach, successors had arrived to carry the imaginative public to foods even more attractive and healthy. The depression of the early 1930s gave the programme a set-back but by the late 1930s the lost ground was more than recovered.

Food Surpluses and Outlets

Then came the era of farm surpluses; the first Roosevelt Administration kept the farmers sweet with 'farm subsidies'. Outlets had to be found for surplus butter, eggs, dried milk and frozen meat. Domestic outlets were found in subsidized food for schools, hospitals, orphanages and créches. But these subsidized gifts must be rationalized—they could not be fobbed off as mere charity; they must be presented as 'health-giving for the nation', and so came the era of superabundant food—let no one suffer from the remote possibility of a sub-optimum diet; pile on the calories, pile in the vitamins, the minerals and the trace elements; let them all come. The kidney will get rid of any excess.

I have described this process as occurring especially in the United States and undoubtedly this was so. Comparatively speaking, other countries lagged behind and the medical profession was still largely indifferent, outside of the USA, to diet as a means of health promotion.

The Start of the National Nutrition Council

In 1938 I returned to the University of Cape Town after 13 years abroad during the last 6 of which I had been actively engaged in nutrition research at the Harvard Medical School and the Universities of London and Cambridge. The Nutrition Council and its Research Committee had just been instituted, I believe through the imagination of Dr. E. H. Cluver, at that time Secretary for Health. It appeared then that most of the knowledge had already been laid for a nutrition programme; all that was needed was better health education and increased farm production.

Those of us who took an active part in the work of the Council were regarded as 'a little peculiar' by our medical colleagues. Food was a matter for administrators and politicians, not for physicians and certainly not for medical research workers. Castle writing in 1952 of his chief, the late Dr. G. R. Minot, says: 'He was accustomed to extract the smallest details of the dietary history of patients with pernicious anaemia on the wards of the hospital in 1922. This was considered by callow interns like myself to be on the whole an amiable eccentricity of an otherwise sound clinician. In this way he established to his personal satisfaction that persons with pernicious anaemia often lived on one-sided diets for many years prior to their illness and sometimes developed a disgust for meat at its onset.'

THE SECOND WORLD WAR AND THE POST-WAR ERA

As often happens, war educated a reluctant medical profession. By 1939 the problems of the 'army which marches on its stomach' was with us again, but this time the army 'flew on its stomach' with a speed and to distances which set quite new demands on the commissariat. The era of 'food plenty for efficiency' had dawned and when after a few years the US Army was 'flying around the world' it demanded a very full stomach and all the gilt on the gingerbread. 'Our boys must have as good food as they had at home', said the American mothers. 'Subnutrition will undermine physical resistance and sap morale' said the Pentagon. The Army Food and Container Institute became one of the greatest subsidized factories in the world, and in turn began to stimulate important research programmes. The American Army fed like fighting cocks, even if the South African Army couldn't get all the biltong it desired. Although the British Army did not feed anything like as well as the United States Army the civilian rationing in Britain under the influence of Lord Woolton and the late

Sir Jack Drummond, building on the foundations of Boyd Orr and the Rowett Research Institute, achieved a triumph of food distribution, so that in spite of import difficulties the total population was better nourished and healthier at the end of the war than before it.

The first 7 or 8 years after the second world war can be regarded as the *protein* epoch in the development of nutritional science. The emphasis on vitamins in the 2 decades between the wars had obscured the importance of protein quality and amino-acid quantity. The foundations for protein physiology had been laid, particularly by Rose, Elvehjem and Holt in America, but the practical significance of protein deficiency had been missed because protein malnutrition was attributed to vitamin deficiency before the era of research in kwashiorkor.

Kwashiorkor and Protein Malnutrition

Among the many names under which this world-wide syndrome had previously masqueraded the only one which gave a definite suggestion of aetiology was the misleading term 'infantile pellagra'. Even this had been discarded for 'malignant malnutrition' in the African continent. At the first FAO/WHO Expert Committee on Nutrition at Geneva in 1949 there was nothing on the agenda about protein deficiency or kwashiorkor as a world problem of nutrition. I was able to get it there only by the subterfuge of asking leave of the Chairman to speak about 'infantile pellagra' under the agenda item 'Pellagra'. I apologized for the subterfuge but explained that I believed the syndrome to represent a world-wide problem of protein deficiency more important than any known avitaminosis. The debate which followed was the most interesting in the week's meetings and started a new direction of enquiry which has been extremely rewarding. World surveys of kwashiorkor and international conferences on protein malnutrition have followed each other in quick sequence and have focussed attention on requirements of nitrogen in general and of essential amino acids in particular. It has been shown that cure can be initiated in kwashiorkor by mixtures of amino acids with glucose and without vitamins. It is surprising that senior and responsible nutrition workers had found this possibility difficult to accept; I know that some of them were betting heavily on the failure of our amino-acid tests at Cape Town, Pretoria and Durban and were predicting the eventual discovery of a new vitamin to cure the syndrome. However, the central role of amino acids in protein malnutrition is now generally accepted. Minimum requirements for the essential amino acids have been worked out, but again it is at least possible that these have been overestimated because insufficient non-essential nitrogen was used in the tests.

Work in the field of protein malnutrition has incidentally thrown new light on liver disease and on the role of trace elements such as molybdenum as essential constituents of enzyme systems. Knowledge in these fascinating fields has only been scratched and much fascinating work lies ahead.

In the field of practical application, kwashiorkor, the most serious and widely prevalent disorder of human nutrition, can probably be largely abolished in a generation. It is becoming increasingly certain that suitable mixtures of vegetable proteins can replace animal protein to a large extent.

Intestinal Bacteria

The microbiological method for assessment of several vitamins is now established. The same methods are being used and hold great promise in the field of amino-acid antagonisms. These methods imply that bacteria have both minimum requirements and recommended allowances. The contribution of bacteria through intestinal synthesis to our requirement of vitamins began with the study of refection in rats when I was a student. It has developed today to the comprehensive studies of germ-free life by the Notre Dame School. The advent of broad-spectrum antibiotics has shown that we are indeed living in symbiosis with our calorie flora. They protect us from invasion by staphylococci and other pathogenic organisms as well as both contributing to our vitamin requirements and competing for our vitamin and nitrogen intake.

Essential Fatty Acids

Before the protein era had been properly launched the era of essential fatty acids was upon us. Reference has been made to the excellent health and nutrition of the people of Britain during the second world war. Few people noted the significance of this in terms of the American era of plenty. And so the US Army ration marched from 35 to 40 and then to 45% of calories from fat. Milk was drunk by the quart and ice-cream sold by the gallon; prime young baby beef became fatter and fatter on artificial pastures, steaks became bigger and fatter. Then came the bombshell. 'Our boys' who died in Korea were found to have significant coronary atheroma at the age of 22.

Although I am not always in agreement with Ancel Keys it cannot be denied that he has opened the eyes of the world to the dangers of over-consumption of fat. His international studies of the triangular relationship between coronary heart disease, blood cholesterol and dietary fat have created a turning point in thinking about the application of human diets to health promotion and disease prevention. For the first time a chronic process of aging has been shown to be preventable or modifiable. It is surprising that more attention was not paid earlier to the excellent health enjoyed by the people of England during the scarcities of the second world war, and to the decline in coronary heart disease mortality which occurred at the same time in the Scandinavian countries. The significance of these figures has only been appreciated as a result of the studies by Keys. Two principles have emerged, viz. (1) that the era of optimum dietary intakes is not necessarily leading to health, and (2) that in at least one respect recommended allowances may have been set dangerously high. I refer of course to fat intake. It has long been suspected that the recommended allowance of calcium and ascorbic acid of the United States Food and Nutrition Board is unnecessarily high; for a recommended allowance to be dangerously high is, however, another matter. A third principle emerges, namely that there may be important differences in quality within a class of nutrient which has been treated as a unit. The significance of qualitative differences between proteins has been apparent for some time and is slowly being interpreted in terms of amino-acid content. The significance of qualitative differences between fats has very recently become apparent, especially with relation to their effects on blood cholesterol. These differences will undoubtedly be interpreted in the near future

in terms of their number of double bonds, their chain length, their content of essential fatty acid etc.

Change in Medical Emphasis

During the last decade a remarkable change of attitude has come over the medical profession in regard to nutritional science. It suddenly appears that those of us who felt that nutrition was a field for scientific enquiry in its own right, and for its possible significance in relation to human health and disease, were not deceiving ourselves. Research into the nutritional aspects of disease has suddenly become exciting and intellectually rewarding.

Re-appraisal

And so the wheel has gone full circle. We have a Nutrition Council, a Nutrition Department, a Nutrition Research Institute, a Nutrition Research Advisory Committee, several Nutrition Research Units, and now a Nutrition Society. We are in the midst of a revolutionary re-appraisal of the relationship of diet to health and disease. Many new interests and possibilities are emerging. Old principles and standards are being challenged.

This challenge even extends to the American 'era of plenty'. Apart from the impracticability of applying American recommended allowances to the underprivileged world, even their desirability is being questioned. Rats and pigs appear to live longer if maximum growth rates are retarded by calorie restriction. A certain nutrition research worker riding around an English university town on an old bicycle in a state of self-imposed cachexia, is becoming the apostle of dietary restriction for longevity.

In the midst of this re-appraisal it is of course difficult to give advice on practical dietetics. A decade ago the medical profession left the dietetic advice to dietitians. Today every doctor feels obliged to give it himself. A decade ago the medical profession laughed indulgently at the whims of 'food faddists' both within and without the profession. Today the food faddists include the doctors who have, or who fear, coronary heart disease. Like Cassius they have 'a lean and hungry look'.

The dust and smoke, however, will clear and the dietitians will be left to their customary work. They will have new standards, but don't ask me at present what those standards will be. At least I suspect that many will be lower than present American recommended allowances. I am proud to say that our own dietary standards committee has taken a lead in this direction in the last revision of the South African Recommended Allowances, and I suspect that it will need to have another revision before very long.

The dietitians will have the responsibility for applying the new standards to the daily diets of our public institutions, our schools, our army and our industrial labour force. They will have the responsibility of educating our school children, our mothers, our housewives and even their husbands (and other people's husbands) in the new dietetic look. Even the French chefs may come to them for advice when their clients look anxious about their fat-calories. And I believe they will have an honourable place in partnership with the medical profession in therapeutic dietetics. The physicians will welcome their aid as soon as the novelty of unsaturated fats has worn itself into their thinking. I believe that the doctor should confine himself to general principles. He has neither the time nor the detailed knowledge to write menus. He will do much better to call in the dietitian for this purpose.

THE KATAYAMA SYNDROME, THE EARLY ALLERGIC STAGE OF BILHARZIASIS

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The fact that the early manifestations of bilharzial infestation little resemble those of the established disease is not sufficiently well known. The classical clinical picture of haematuria, ureteric damage and generalized visceral bilharziasis, which appears many months after the parasite has invaded the body, should be regarded as late sequelae at which stage treatment may be ineffective. The Katayama syndrome, or bilharzial fever, which occurs in from 5 to 50% of cases, develops 4–10 weeks after the parasitic infestation, and is characterized by fever, generalized symptoms of ill-health, urticaria and eosinophilia.

The purpose of this communication is to report a case of the Katayama syndrome and to point to the advantage of treatment at this early stage, as a means of preventing late sequelae.

CASE REPORT

Mr. E.H.S., aged 22, was admitted to the Johannesburg General Hospital on 20 April 1957 because of severe headache, backache, fever with daily rigors, and abdominal pain of 2 weeks' duration. He gave a history of having paddled his feet over the side of a rowing boat 5 weeks previously in a lake known to be infested with bilharzial snails. At the onset of symptoms, 2 weeks before admission to hospital, he had consulted a private doctor who, after investigation, had treated h m for malaria without any apparent improvement.

The patient was ill and pyrexial (101°F). He complained of drowsiness and found difficulty in concentrating. The spleen was easily palpable, and tenderness was elicited over the liver area. Nothing abnormal was observed on examination of the chest. Neither urticaria nor lymphadenopathy was observed. Pyrexia continued for 7 days, with an evening rise sometimes reaching 103°F and accompanying rigors. On 26 April the patient was seen by Prof. G. A. Elliott, who suggested the diagnosis of Katayama syndrome. This was later confirmed by laboratory investigation, the patient in the meantime being given Miracil D in a total dose of 75 mg. per kg. of body-weight. Response to this treatment was excellent, although the exhibition of the drug was accompanied by extreme nausea and depression. Within 2 days the pyrexia had subsided and the patient has since had no recurrence of pyrexia or ill-health.

Laboratory Investigations

6 *April* (before admission to hospital). Blood: Haemoglobin 15 g.%, leucocytes 7,000 per c.mm. (N. 59%, M 12%, L 29%, E 3%). Blood smear for malaria parasites negative. Urine: Urobilin ++++. Cultures of urine, stool and blood negative. Widal, Weil-Felix and Malta fever agglutination reactions negative. Chest X-ray negative.

21 *April*. Blood: Haemoglobin 14·6 g.%, leucocytes 8,000 per c.mm. (N 60%, M 10%, L 28%, E 3%), ESR 22 mm. in 1 hour (Westergren). Repeated blood smears for malaria parasites

negative. Urine, stool and blood cultures negative. Urine: Urobilin ++++. Widal, Weil-Felix and Malta fever agglutination reactions negative. Chest X-ray negative.

24 *April*. Blood: Haemoglobin 14 g.%, leucocytes 11,000 per c.mm. (N 20%, M 6%, L 15·5%, E 58·5%). Malaria parasites not detected in blood smears. Paul-Bunnell test negative. Urine: Urobilin ++++. Liver function tests: Albumin 3·1 g.%, globulin 4·4 g.%, alkaline phosphatase 12·4 King-Armstrong units, thymol turbidity 4·5 units, cephalin cholesterol flocculation ++++, thymol flocculation +, colloidal red ++.

26 *April*. Blood: Haemoglobin 14·6 g.%, leucocytes 10,000 per c.mm. (N 20%, M 1%, L 29%, E 50%). Bilharzial complement-fixation test doubtful positive. Urine: Urobilin ++++.

27 *April*. Blood: Haemoglobin 16·5 g.%, leucocytes 6,700 per c.mm. (N 15%, M 3%, L 33%, E 49%). Bilharzial complement-fixation test strongly positive. Search for bilharzial ova in the urine and stools repeatedly negative. Urine: Urobilin ++++.

5 *May*. Blood: Leucocytes 8,000 per c.mm. (N 50%, M 20%, L 18%, E 12%). Bilharzial complement-fixation test positive.

DISCUSSION

History

The original description of Katayama syndrome referred to the invasive phase of *Schistosoma japonicum*, of which the intermediate host is the Japanese snail *Oncomelania* (*Katayama*) *nosophora*. During the early part of the 20th century the cause of this illness, variously known as river fever, Yangtse River fever, Kiukiang wading fever and urticarial fever, was unknown until Logan[1] and Houghton, in 1911, suggested its aetiology.

Also in 1911, Flu,[2] in the West Indies, called attention to febrile symptoms resembling the Katayama syndrome in infections with *Schistosoma mansoni*. In 1916 Lawton[3] described an outbreak of bilharziasis among Australian troops in Egypt in which the urticarial symptoms tallied with those described in the Japanese disease. In 1919 Fairley,[4] in a comprehensive and brilliant review, confirmed the specificity of the Katayama syndrome, which he found to be present in over 50% of his cases of bilharzia. He called attention to its occurrence in infections both of *S. mansoni* and *S. haematobium*. In 1933 Pons and Hoffman[5] reported 7 cases associated with *S. mansoni* infection.

The South African literature on Katayama syndrome is not extensive. Cawston[6] (1923) in a letter to the editor of the *South African Medical Record*, described the first recorded South African case and commented on the pyrexial nature of the illness associated with eosinophilia and liver enlargement. Gelfand[7] (1942) reported the first South Rhodesian case. Since then Gelfand and Osburn[8], Lurie,[9] Walt[10], Ritchken and Gelfand,[11] and Ritchken[12] have described further cases, all presenting a similar clinical pattern.

Pathogenesis

To understand the pathogenesis of the Katayama syndrome it is necessary to trace the course of events following the entrance of cercariae into the body.

In the fresh-water snail, the miracidium develops through various stages to the full-swimming cercaria, which is capable of penetrating human skin. When this happens, it has been observed that many patients complain of an itchy rash on one leg, which disappears spontaneously after one or two days (P. Keen, personal communication). This is probably due to a skin reaction to the cercarial penetration. The cercariae reach the right side of the heart *via* the venous system and thence pass to the lungs. Two alternative routes are then postulated: (*a*) The schistosomules leave the circulation and migrate through the mediastinum, diaphragm and liver to reach the portal system, or (*b*) the schistosomules return to the left side of the heart and are carried through the aorta to the wall of the gastro-intestinal tract, after passing through which they reach the portal branches in the liver *via* the mesenteric veins.

For 4 weeks the male and female schistosomes mature separately in the liver, and then enter into the stage of sexual activity. They travel in pairs against the blood stream into the mesenteric veins to reach the bladder, large intestine and other viscera, where the female deposits her ova. This period of migration is known as the 'sexual tour'.

It is probable that during the stage of migration toxic and antigenic material is liberated into the general circulation and is responsible for the symptom complex known as the Katayama syndrome. This usually occurs 4–6 weeks after exposure. The bilharzial complement-fixation test becomes positive, eosinophilia appears, and an anaphylactoid reaction, including urticaria, pyrexia and pulmonary infiltration, may appear. The underlying cause of this allergic reaction is unknown. Fairley[13] classified toxic substances of the schistosomes as (1) specific glandular secretions containing enzymes, (2) by-products of metabolism, and (3) excretions, including the catabolites of haemoglobin such as bilharzial pigment. It is suggested that the body becomes sensitized to these toxic substances, with the production of an allergic state.

The Clinical Syndrome

Whilst the general clinical picture has all the hall-marks of a pyrexial illness, Ritchken[12] has clearly described the onset of the illness, and attempted to divide the syndrome into various groups. The onset is usually insidious, with symptoms of tiredness, headache, giddiness, lack of interest and generalized muscular pains. Less commonly the onset is acute, with severe headaches, rigors and vomiting. In this type, the illness is often confused with malaria, as occurred in our case. The clinical groups described are:

1. *Recurrent Urticarial Attacks*. The urticaria presents either as small wheals occurring in crops or as angioneurotic oedema of the face, lips, prepuce or scrotum. Pyrexia and eosinophilia accompany the urticaria.

2. *Recurrent Febrile Attacks*. There is an evening temperature for periods varying from 2 to 10 weeks, associated with rigors, headaches, vomiting, muscular pains and a cough.

3. *Glandular Type*. Generalized superficial lymphadenopathy occurs, the glands being small, discrete and painless. Confusion may thus arise with glandular fever.

4. *General Ill-health*. The patient complains of headaches, giddiness, abdominal pain, lack of energy and loss of appetite. Crops of urticaria may occur and the eosinophil count may be high, but is often only slightly raised. This group is the most difficult to diagnose.

5. *Pulmonary Type*. There is usually an acute onset of pyrexia, with cough, breathlessness and cyanosis, and an associated eosinophilia. Ritchken and Gelfand[11] suggest that this sub-group of the Katayama syndrome should be classified under that of simple pulmonary eosinophilia or Loeffler's syndrome. Crofton *et al.*[14] define the latter as a condition in which pulmonary infiltration discerned on X-ray is accompanied by blood eosinophilia; the lung changes consist of small areas of alveolar exudate with many eosinophils, and these authors consider that the entire group of 'simple pulmonary eosinophilia' represents a

hypersensitivity reaction of the body to many stimuli, e.g. toxins of ascaris, ankylostoma, trichinia and now also *Schistosoma mansoni*, *S. haematobium* and *S. japonicum*. This concept would correspond to the generally accepted ideas of Girges[15] and Ritchken[12] concerning the pathogenesis of the Katayama syndrome.

Hepatic Involvement

In the clinical descriptions of the Katayama syndrome, including Ritchken's authoritative review, little mention is made of the presence of hepatic dysfunction. Liver involvement has however been well recorded in pulmonary eosinophilia (Loeffler's syndrome) by Crofton *et al.*,[14] who reported cases showing focal hepatic necrosis. Leckert[16] has recently described a case of Loeffler's syndrome showing, on liver biopsy, the presence of many eosinophils in the hepatic sinusoids. In the case recorded here the patient had marked derangement of liver function tests, with reversal of the albumin-globulin ratio, and consistent presence of urobilin in the urine. It is not unreasonable to speculate that pathological change occurs in the liver similar to that which occurs in the lung. Unfortunately liver biopsy was not performed in our case.

DIAGNOSIS AND TREATMENT

The cardinal clinical features pointing to the diagnosis of the Katayama syndrome are general ill-health, headache, generalized body and abdominal pains, pyrexia (particularly an evening temperature), which can be associated with rigors, urticaria and cough. Laboratory investigations, particularly a positive complement-fixation test and the presence of an eosinophilia, greatly assist in the diagnosis but only after the lapse of some weeks. Lurie[9] reported 8 cases infected with *S. haematobium* who developed a positive complement-fixation test in 3 weeks and an eosinophilia in 4–7 weeks. Cercarial antigen skin tests in these 8 cases were consistently negative. In our case eosinophilia and a positive complement-fixation test appeared almost simultaneously 6 weeks after exposure. The fact that the first three differential leucocyte counts were normal, indicates the importance of repeated blood counts in establishing the later development of eosinophilia.

Having established a diagnosis, should treatment be given immediately or be delayed until ova have been demonstrated? It is generally felt that the treatment should be started immediately. Lurie[9] recommends the use of Miracil D (Nilodin) in a dose of 75 mg. per kg. of body-weight in divided doses over a period of 5 days. This was administered to our patient with a good result. Toxic manifestations of nausea and extreme physical and mental depression should not allow cessation of treatment. Walt[10] considers that a higher dose is preferable, viz. 100 mg. per lb. body weight, and advises that this should be followed by a course of a parenteral antimony preparation. Ritchken[12] apparently prefers intravenous Anthiomaline as the antimony preparation. Both Walt and Ritchken however, only started treatment after the appearance of ova in the stools or urine.

SUMMARY

A case of Katayama syndrome, the allergic 'toxaemic' phase of infestation with the bilharzial worm, is described. The history of the disease, its pathogenesis, clinical features, diagnosis and treatment are briefly reviewed. Mention is made of marked disturbance in liver function tests occurring in the case reported and a tentative explanation is offered.

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NEW METHODS IN PSYCHOTHERAPY: A CASE STUDY

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> 'Cure comes through learning healthy personal relationships *now*, and not by stewing over past emotional frustrations.' *Salter*[1]

The general medical practitioner is frequently quoted as saying that more than half the patients he encounters in his daily rounds are 'just plain neurotic'. Since the general practitioner cannot spend hours treating his neurotic cases, a large number of them receive no therapy other than tonics and sedation. Others, less fortunate, succumb to the exhortations of swamis, mystics and a host of pseudo-scientific practitioners. This is an alarming situation. The initial responsibility for the psychological welfare of his patients usually rests with the family doctor, but the field of psychotherapy is itself so confusing that many doctors have expressed undisguised scepticism about its value. Most medical men do not have time to venture into the complicated polemics of orthodox Freudian psycho-analysis, or the claims of Jungian analysts, or the counter-claims of any other deviant psycho-analytic school. Similarly, the average doctor is not concerned with the differences between the various eclectic therapists or any other of the numerous controversies which characterize the field. It is therefore confusing, even for the average professional person, to view the many methods of treatment that are employed for emotional illness. But even more confusing is the fact that 'roughly 2/3rds of a group of neurotic patients will recover or improve to a marked extent within about 2 years of the onset of their illness, whether they are treated by means of psychotherapy or not'.[2]

The last decade, however, has seen the growth of a new behaviourist psychotherapy built on the firm scientific bedrock of neurophysiology. Its concepts stem from carefully controlled laboratory experiments and its therapeutic tools are derived from the laws of learning. This *Journal* has already printed several articles dealing with the experimental and theoretical background, methodology, therapeutic efficacy and clinical advantages of behaviour therapy.[3–6] The present article is intended to provide the general practitioner with a broad working knowledge of this approach. We firmly believe that more intimate team-work between doctor and psychotherapist will, in the long run, prove most beneficial. We also hope to disprove the myth that psychotherapy, by its very nature, must always be difficult, time-consuming and inefficient.

Where necessary, the behaviourist or objective psychotherapist employs all the usual psychotherapeutic techniques, such as support, guidance, insight, catharsis, interpretation, environmental manipulation, etc., but in addition to these more 'orthodox'

procedures, the behaviour therapist applies objective techniques which are designed to inhibit specific neurotic patterns. His orientation is away from the analysis of hypothetical 'minds-within-minds', and his focus of attention is placed instead on his patient's behaviour. Patients learn to behave in a maladaptive fashion, and if one is to cure the patient these ways of behaving must be eliminated. Wolpe's[7,8] experimental evidence and clinical research have revealed that neuroses are acquired in anxiety-generating situations and that successful therapy of the neuroses therefore depends on the reciprocal inhibition of neurotic anxiety responses. His methods have yielded a 90% level of 'apparently cured or much improved' cases.[8] It is probably safe to say that regardless of differences in theory or technique, the 'cures' that occur are accompanied by kinds of changes in personality that can be interpreted as involving learning.[9] Recognizing that neuroses are learned within a social milieu, much emphasis is placed on the fact that the patient is not a clinical label but a human member of society and therefore all specific procedures are applied within the very broad context of social adaptation. This broad social and cultural emphasis by no means precludes the application of detailed or specific procedures where indicated. Behaviour science is concerned with the entire range of acitivity from the most complex aspects of human interaction right down to the firing of a single neurone. Thus the behaviour therapist does not limit himself to a specific technique—his repertoire of therapeutic methods is sufficiently large and flexible to fit the needs of the individual patient. Therefore the objective therapist is able to swing the focus of attention back and forth from the individual and his or her parts, to the individual in his or her social setting. Another difference between the behaviour therapist and most other psychotherapists is the fact that the behaviourist is not bound by any fixed ritual to delve into the remote history of *all* his patients. As Rachman[6] has shown, many impressive cures have been effected without any attention being given to the causative factors involved. In our view, 'the emphasis in psychological rehabilitation must be on a *synthesis* which would embrace a diverse range of effective therapeutic techniques, as well as innumerable adjunctive measures, to form part of a wide and all-embracing re-educative programme'.[10]

The presentation of a treatment project should clarify many of these issues and enable the doctor to appreciate more fully the advantages of modern behaviourist psychotherapy. The following case was selected for several reasons: (1) a variety of techniques was employed; (2) many of our general statements are clearly illustrated; and (3) the didactic elements of the case are not obscured by its complexities. We propose to present a fairly detailed account of each session from the initial diagnostic interviews until the termination of therapy.

THE CASE OF L.H.R.

Extract from G.P.'s Letter of Referral: 'This is to introduce Mr. L.H.R., aged 36 years . . . . He appears to be suffering from anxiety and tension . . . . tranquillizers have not helped and his condition seems to have deteriorated in recent weeks . . . . '

Initial Interview (time 75 minutes)*

After putting the patient at ease, a detailed life history was taken. Here are the relevant points: Youngest of 5 children; unhappy home life (inadequate father, stern and over-solicitous mother); poor sibling relationships; childhood terrors retained until early puberty (fear of the dark, nightmares, and kidnappers); extreme masturbatory guilts during adolescence; volunteered for active service but was rejected owing to high blood pressure and 'black-outs' (no 'blackouts' for past 12 years); work situation unsatisfactory (employed as a draughtsman although he has an architectural diploma); poor social and inter-personal relationships ('I have a few friends but most people try to ride me'); principal interests 'painting, sketching and science fiction'; present adjustment towards sex satisfactory ('We hope to get married if I can get a better job.'); his 3 brothers were killed on active service; his father died shortly after the war from 'heart failure'; his sister is married and lives in Canada; patient shares a 2-roomed flat with his mother.

Asked to express his problems in his own words, Mr. L.H.R. replied: 'I've always been jittery and too particular about things. I suppose I expect too much of myself. Anyhow most of the time I just feel . . . . miserable. I sometimes get stupid thoughts like doing away with myself . . . . I'm already 36 and what have I got to show for it? . . . . My worst trouble is that I'm always checking and re-checking everything. You know, even when I know for sure that the door's locked I've always got to go back and make sure again and again. It's like that with everything. At work, for instance, I'll check the scales again and again and even though I know that the detail is correctly mapped, I go over the figure about ten times before I do the next one. Sometimes it nearly drives me mad but I've just got to go on and on . . . . '

General impressions. Well-groomed, pleasant looking, slender build, active, tense and agitated, timid and reserved. He appears to have little (if any) insight. At this stage, he could be summed up as an anxious, compulsive and inhibited individual.

2nd Interview (time 40 minutes)

This session was largely an extension and elaboration of the previous interview. Certain areas of the patient's history were discussed and checked. Additional information emerged, such as the fact that he was still being dominated by his mother and that his compulsive acts (which started in early puberty) became more severe after the death of his father. 'In the last few months things have really been worse than ever—quite unbearably so. I don't know why this is, but I suppose that it has to do a lot with the way my mother has been carrying on . . . . She's been going at me pretty solid . . . . She says that it's a pity that I wasn't killed up North instead of the others. Of course she doesn't mean anything by it, but it's upsetting . . . . Also my girl friend and her don't get on so well and my mother said that if I marry her, she'll cut me out of her will.'

The discussion then turned to the more detailed and intimate aspects of his home background. The Willoughby Neurotic Tendency Inventory[11] was applied and the score (63) indicated a high level of neurotic disturbance. The qualitative conclusions were: 'This person shows obvious insecurity mingled with feelings of hypersensitivity and guilt.'

3rd Interview (time 2 hours)

This session (apart from a brief discussion on relaxation) was devoted solely to diagnostic psychological testing. The patient was shown to have 'superior' Mental Alertness as measured by the N.I.P.R. Test A/1/1[12] and his corrected IQ was 120 on the South African Individual Scale. Selected items on the Thematic Apperception Test[13] together with the Holsopple-Miale Sentence Completion Blank[14] revealed significant clinical trends. Apart from obvious compulsive features, these records indicated underlying trends of unexpressed hostility towards parental figures (especially towards the maternal figure), coupled with generalized anxiety. There was also evidence that he avoided personal challenge presented by others and offered little himself. Although aggressive responses were prevalent throughout, more often than not these impulses were intrapunitive (i.e. 'self-punishing').

Readers who are at all familiar with Freudian writings will find this case rife with analytic material. From the behaviouristic viewpoint, however, the important aetiological factors are briefly the faulty habits which were generated in the home situation and then reinforced by subsequent stress situations. It follows, therefore, that the therapy programme was designed to eliminate or reduce the frequency and intensity of these non-adaptive responses.

4th Interview (time 1 hour)

Approximately 30 minutes of this session were devoted to further discussion about the patient's early homelife. The patient was allowed free rein and dwelt mainly on the 'injustices of his upbringing'. Certain of his statements suggested paranoid elements but most of his remarks had the ring of helplessness and self-pity. After about 20 minutes, the interpretation was suggested that the patient's remarks seemed to indicate feelings of hostility towards the individual members of his family. He immediately countered with vehement over-protestations about their 'underlying good intentions'. The therapist's non-commital 'uh-huh' precipitated a severe reaction: The patient immediately covered his face and wept. After a while he looked up and said, 'You're right, I hate the . . . lot of them!' This significant admission led to further uncontrolled weeping which gradually subsided when the therapist finally managed to impart his acceptance, approval and sympathy together with the fact that the patient's feelings and reactions were 'normal and quite justifiable'. The remainder of the session consisted of training in progressive relaxation.[15]

5th Interview (time 1 hour)

Mr. L.H.R. stated that he was generally feeling much better, but that 'my mother is now getting me down more than ever

* Unless otherwise stated, the patient was seen twice-weekly.

before . . . . Let's face it, I'm financially dependent on my mother . . . . and my work has been slower than ever because of that . . . . checking and re-checking'. The patient then switched the emphasis to his early sexual difficulties and a frank discussion followed which was designed to dissipate residual guilt-feelings by sanctioning his conduct and by imparting non-moralistic insight into all matters pertaining to sex. The patient was then given preliminary training in 'assertive responses'[8,16] (i.e. he was provided with specific instructions on handling all interpersonal relationships adequately and spontaneously 'standing up for his own rights').

6th Interview (*time* 1 *hour*)

After a short discussion about Mr. L.H.R.'s girl-friend, further training in assertive responses was given. The patient was urged to be assertive in all situations. He complained that the mere thought of being assertive made him feel afraid, but he was told that with practice, these techniques would soon come to him automatically. Training in progressive relaxation completed the remainder of this session.

7th Interview (*time* 1 *hour*)

The patient spoke at length about his father and about his present attitude towards his mother ('If I ever want to live, I've got to break away from her'). His compulsive behaviour was then discussed and the patient summarized the situation as follows: 'If I could only stop myself from this business of re-checking everything ten times then I'd have a chance. I know I'm good at my work but I'll never get senior posts until I manage to work faster . . . . These compulsions are the things that mess up my whole life.'

8th Interview (*time* 40 *minutes*)

Approximately 20 minutes were devoted to additional training in assertive responses by means of 'psycho-drama' (i.e. the therapist assumed the role of various 'threatening figures' and the patient was required to oppose them). The rest of the session consisted of relaxation therapy with preliminary hypnotic suggestions. He responded well to the hypnotic procedures and a catalepsy of his right arm was easily induced.

9th Interview (*time* 40 *minutes*)

The patient seemed unusually excited. 'It's working,' he announced as soon as he walked in, 'yesterday for the first time, I stood up to my mother and she got such a shock that she just said nothing . . . . I even asked my boss for a raise. I didn't get it, but at least I asked . . . . ' The therapist expressed his approval and delight at his progress and encouraged him to continue practising this new habit of assertive responses. (One obviously has to use one's discretion in advising assertive behaviour as the aim is definitely not to make people become objectionably aggressive. In this instance, Mr. L.H.R. was so very inhibited that there was never any risk of making hom permanently aggressive and at best, by acquiring assertive habits, he would be able to achieve a better balance in his assertiveness-submissiveness ratio and not serve as a perpetual doormat for the rest of his life.) Hypnotic relaxation was then administered for 15 minutes and a glove anaesthesia was induced without difficulty.

10th Interview (*time* 30 *minutes*)

The patient was hypnotized and given more or less the following instructions while in a deep hypnotic trance: 'You feel calm and relaxed, deeply relaxed and peaceful. Now I want you to imagine yourself at work. You still feel ca'm and relaxed. Now imagine yourself drawing a plan and checking as you go along. You're quite relaxed. You check it once. Everything is correct. You make sure and go over it again. You are still calm and relaxed. You begin to check it a third time, but now suddenly you feel anxious. You feel uneasy and tense. Rapidly the tension mounts. (The patient was writhing and breathing very heavily at this stage.) You leave the plan. You do not check it again. Now you start a new drawing. Picture the new situation. As soon as you start the new activity you are once again calm and relaxed. You feel calm and peaceful . . . When I count up to five you will open your eyes.' When asked to recall what had transpired while under hypnosis, the patient at first appeared to be completely amnesic, but after a while he was able to recollect the entire session and reported that he had visualized the situation 'just as though I was there at the time'.

11th-19th Interviews (*time of each* 30 *minutes*)

The hypnotic procedure employed in the previous interview was applied, with slight modifications, until the end of the 19th interview, when the patient reported that his compulsions no longer troubled him in the work situation. 'I'm turning out five times more work than before . . . Sometimes I still tend to fuss over things more than I ought to, but that doesn't worry me.' Specific instructions in assertive behaviour were also given prominence throughout these interviews. On the 12th interview, the therapist was about 20 minutes behind time and Mr. L.H.R. politely reprimanded him by saying. 'You should have told me that you were running late and I would have slipped down for a haircut meanwhile.' This was indeed an impressive improvement from his previously inhibited and almost obsequious behaviour. The therapist apologised for the delay and later expressed his strong approval of Mr. L.H.R.'s assertive behaviour.

20th Interview (*time* 30 *minutes*)

The patient was not seen for nearly 5 weeks. He had had an emergency appendectomy and had developed certain complications after the operation. 'I've been back at work now for two days . . . I've been doing a lot of thinking this past month and you'll be surprised to hear what I've done . . . I've asked Betty (his same girl-friend) to marry me . . . I've accepted a job in Cape Town . . . My aunt recently lost her husband and she is coming to live with my mother . . . We plan to leave town as man and wife before the 16th (less than 3 weeks) . . . Do you approve of all this? . . . ' The therapist expressed his strong approval of all Mr. L.H.R.'s decisions. The need to continue practising assertive behaviour was again impressed upon him.

21st Interview (*time* 1 *hour*)

This interview took place 15 days after the previous one. Mr. L.H.R. was accompanied by his fiancée. She was interviewed privately and seemed a sensible person with considerable understanding and insight. At the end of the interview she said. 'Now that L. has learnt to stand on his own two feet, I'm sure we will make out just fine.' Mr. L.H.R. was then asked to come in, and the conversation terminated with a general discussion about their future plans.

Periodically he communicated with the therapist by letter. Eight months after therapy, en route to Rhodesia, Mr. L.H.R. telephoned the therapist and reported that he had maintained a satisfactory adjustment. 'I have conquered the compulsions for good and everything is better than I ever expected.'

DISCUSSION

This case was not presented for its dramatic interest, since it is by no means spectacular and it is certainly not intended as a 'model case'.

The first 4 interviews employ the usual diagnostic and psychotherapeutic procedures but, after that, the more objective techniques are brought into clearer focus. It is soon apparent that the patient's principal problems are 'inhibitions and compulsions,' and from the 6th interview onwards, the therapist is obviously of the opinion that if these two factors are eliminated, the rest will automatically fall into place. By the 8th interview, the emphasis is present-and-future orientated and, contrary to analytic preachings, little time is devoted to 'digging up the past'. The reader will have observed the fact that the compulsive features were adequately reduced without any attention being given to the causative factors involved.

We should like to give a brief theoretical explanation of our hypnotic procedure as applied to the patient's compulsive acts. It is generally agreed that obsessional or compulsive symptoms have the effect of allaying or inhibiting anxiety. We know, for instance, that if a patient is prevented from satisfying his compulsive urges he displays acute anxiety until he finally carries out his ritual. Now if we reverse this process, (i.e. the patient becomes anxious when performing his compulsive act and feels complacent when avoiding compulsive behaviour) the compulsive acts should automatically fall away. This, at least, is the theory behind the hypnotic procedure employed. Wolpe,[8] however, reports more sophisticated objective techniques, with wider applicability, for handling compulsive and obsessional neurotics. 'Orthodox' practitioners would argue that symptoms removal without the elimination of the 'underlying cause' does not constitute a 'cure'. Rachman,[6] however, has shown that 'too great a concern with "underlying causes" may under certain circumstances even impede therapeutic progress.' Eysenck[17] expertly summarizes the situation as follows: 'According to Freud, there is a "disease" which produces symptoms; cure the disease and the symptom will vanish. According to the alternative view,

there is no "disease", there are merely wrong habits which have been learned and must be unlearned.'

The bulk of the treatment (i.e. 19 interviews) extended over 10 weeks and the total time spent with the patient amounted to less than 16 hours. He was considered 'much improved' in terms of Knight's 5 criteria[18]—symptom improvement, increased productiveness, improved adjustment and pleasure in sex, improved interpersonal relationships, and increased stress-tolerance.

SUMMARY

Some important practical and theoretical advantages of behaviour therapy are outlined. These include objective techniques, controlled experimental backing, effective short-term therapeutic programmes, and a high level of cured and improved cases. A treatment project is presented in some detail in the hopes of providing the general medical practitioner with additional insight into the dynamics of behaviour therapy.

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THE EVIL EYE AND THE AFFLICTIONS OF CHILDREN

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'And Saul eyed David from that day and forward'
1 *Sam.* 18 : 9

About a year ago our Bantu servant Christina decided that she could no longer live in her room on our premises, as it was haunted by the *Tokoloshe*, the Zulu evil spirit. This is a matter of concern in South Africa, for a house once branded as the haunt of the *Tokloshe* cannot easily retain a servant, and its market value may depreciate considerably. Accordingly, her diagnosis was regarded with some seriousness. Now the exorcism of the *Tokoloshe* by a witch-doctor is an expensive undertaking and not always successful, so I decided to do the procedure myself.

Late at night I asked her to leave her room while I walked inside holding a lighted candle. I demonstrated to her that I possessed some powerful white man's *muti* in the form of an attractive red capsule (polycycline) wrapped in gold foil—a free sample. It looked impressive, and I assured her that it was most effective against the *Tokoloshe*. I opened the capsule and sprinkled some of the yellow powder on the window-sill and in the doorway, muttering a few home-made spells and incantations the while. Henceforth, I confidently told her, the *Tokoloshe* could not enter either by the door or the window.

The exorcism by polycycline was highly successful. The *Tokoloshe* was banished and has not returned.

This is not an indication for smiling at the naïveté of the Bantu. We, the sophisticated Whites also have our witchcraft, though it is often difficult to discern it as such. Who realizes, for example, that when a doctor heads his prescription with the familiar ℞, he is invoking the aid of an amulet against the Evil Eye?[1] The mother, singing a lullaby to her babe, is warding off the influence of evil spirits.[2] We rarely give a thought to the tens of thousands who regularly have their horoscopes read, or who seek admittance to the esoteric wisdom of mystical societies. What of the millions who carry around amulets in the form of stones, beads, ornaments, crucifixes or *mezuzoth*? The local parlour magician who mutters the magic term *abracadabra* is but repeating the incantation of the wonder workers of ancient Chaldea, while the Jewish mother who intones *ken ayin hara* is bringing 40 centuries of magic into the Sputnik age.

THE EVIL EYE

For the Evil Eye is surely at least 4,000 years old, and perhaps as ancient as the very serpent that enchanted Eve. The Hebrew *ayin hara*, the *böse blick* of the Germans, the *jettatore* of the Italians, have their origins in the mysterious East.

To 'look daggers' at an individual, is, after all, to wish him ill, *via* the medium of an Evil Eye. In all ages, to boast, to admire, to covet, to envy or to praise an object, an animal, or a person, was to invite disaster through the Evil Eye. This pernicious influence was commonly directed against the young, although it could also cause animals to abort or to produce sour milk, while it might make crops wither and die.

When man first considered the world about him, he peopled the earth and the heavens with gods and spirits, with angels and devils, for only thus could he explain the vagaries of nature, the terrors of the unknown. In this fertile soil of ignorance and fear, intermediaries arose whose function it was to interpret the gods to man. Thus flourished the magicians, the wizards and sorcerers, the soothsayers, astrologers and witch-doctors. Man and his brothers in magic thereupon developed a protective mechanism consisting of the secret word, the spell, the incantation, the charm, the talisman, the amulet. And the function of all these devices was quite simple and uniform: it was that of self-preservation, and preservation of the family and tribe, and of the home, the women and children, the cattle, crops and possessions. Extended, the function of these diverse mechanisms became more general—to bring man good fortune and to drive away bad luck, ill health and death. It was magic for coercing the mysterious forces of nature to do man's will, to assist him to beget children, to overcome his enemies and to prosper. And of all the malign factors that were constantly poised to assail man, none was more awesome, none was more feared by primitive man, than the Evil Eye—the malevolent glance—the belief that there were certain spirits, people or even animals whose very gaze was so potent that they could harm or even destroy and kill, merely at a glance.

When the concept of gods became more crystallized, the powers of the spells and amulets were ascribed to them. The gods worked through them. Thus not only man needed the magic of the amulets, but the gods also needed them. Indeed the gods could not exist without the help of magic. Thus religion and magic are intertwined. It is hardly necessary to point out that the author of Judaism, while decrying magicians and sorcerers, was no mean magician himself. Moses outsmarted the very elite of Pharaoh's court!

The Evil Eye was a condition which might be present in man himself, in animals, or even in a personification of the forces of evil. The effect of this evil glance was to fascinate the object looked at, to enchant it, to cast a spell on it, to hypnotize it. Thus we have the origin and understanding of the term 'fascination' (*fascino*, I bewitch). It is related to the mesmerizing effect of the Evil Eye. A relation exists with the fascinating power possessed by the serpent, a reptile whose wiles were known in the folklore of many peoples. The diabolical glance of the serpent could stiffen and paralyze birds and animals. It is no coincidence that the Hebrew term for an enchanter, one who fascinates people, is *menahesh*, derived from the term *nahash* (serpent).

HISTORICAL

The belief in the Evil Eye originates in the East, and has spread widely, from China to the lands of the Mediterranean and to the West. It is unknown among the early indigenous populations of the Americas and Africa. Apparently first recorded in *Babylonia*, where fascination was thought to be the cause of most

diseases, the belief flourished and spread. The demon *Utukku* (noted in the Gilgamesh epic) could cause injury to a man by a mere glance. There are distinct references to the Evil Eye in Assyrian writings of the 7th century B.C.

The *Egyptians* also believed in the Evil Eye, even though their writings do not allude to this matter directly. The god *Ptah* brought forth all the gods from his eye and men from his mouth.

In ancient Persia, the 99,999 diseases afflicting man were ascribed to the Evil Eye of *Ahriman*—the Zoroastrian satan, the Force of Darkness. The belief in the Evil Eye is common in India, China and Abyssinia.

The Evil Eye is somehow inseparably bound up with evil spirits and in antiquity was often equated with them. The Evil Eye is thus sometimes clothed in a personality, and the form especially taken was that of *Tiamat*, the ancient *Sumerian* personification of evil. Another form adopted was that of Lilith, the night monster who is referred to in Isaiah (34 : 14, see also Ps. 91 : 5). It has been suggested that the term 'lullaby' may be derived from *lili aby*, a lullaby being an incantation against that arch-fiend Lilith, the monster who specialized in afflicting infants and children.[2]

The eyes have held the interest of man from earliest times. In their clear transparency are portrayed man's hopes and fears and feelings. They are the windows of the soul. They were thought to emit rays in the direction of the object which they were examining; and the rays might be ones of love—in which case good, or white fascination might result, or the rays might be malicious, so causing evil or black fascination. People with ocular deformities were especially prone to be fascinators. The common English term for squint is 'cast'; a squinting person cast his rays in a particular direction when he gazed at an object.[3] The modern Italian term *jettare* also means to cast or throw—but a *jettatore* does not necessarily have a squint.

The wealthy especially had cause to fear a glance of enchantment, for their possessions aroused envy, and envy is indissolubly linked with the Evil Eye. The very term is derived from *invidere* (to look maliciously upon). Jealousy, admiration, praise and boastfulness are likewise linked with the Evil Eye. To have oneself or one's possessions praised was an open invitation for the Evil Eye. Some of the symptoms which this malevolent glance might occasion were ophthalmia, trachoma, colic, fever, hiccough and yawning. Children were particularly predisposed to the diabolical stare, as were also pregnant women and nursing mothers.

The possessor of an Evil Eye did not necessarily know that he was so afflicted. Indeed, involuntary fascination was much commoner than deliberate enchantment. An instance is recorded of a man who believed himself to have an Evil Eye and blinded himself in order to protect his children from harm.

The early Greeks and Romans were great believers in the Evil Eye, and their myths and literature abound with reference to it. Plato (429-327 B.C.) believed in it. Theocritus said it was necessary to spit three times into the breast of a person who feared fascination. Herodotus, Ovid and Horace refer to it. Heliodorus, a Greek writer (3rd century A.D.), described the case of a very sick girl afflicted with a wasting disease, who explained her illness as due to the lavish praise which her beauty had brought upon her by admiring friends, among whom were several possessing the Evil Eye. In Rome, Pliny (23-79 A.D.) reported that special laws were enacted to prevent injury to crops from the Evil Eye. He said that there were certain women who could cause plants to wither by a mere glance. Plutarch (46-120 A.D.) writes, 'Some men by looking upon young children hurt them very much, their weak and soft temperature being wrought upon and perverted, whilst those that are strong and firm are not so liable to be wrought upon'. Among the Romans, when praising anything it was customary to add a special phrase in order to counteract the influence of the Evil Eye.

In Abyssinia, the pagans wore stones and beads to avert the evil glance, but the Christian Ethiopians used a spell in the form of a legend written on a parchment amulet and worn on the person. The legend relates how Jesus demonstrated a woman with the Evil Eye sitting at the banks of the Sea of Galilee. He mentioned that if the gaze of her eye chanced on a cow that was being milked, then the milk went sour and turned to blood, and 'when this Eye looketh upon a woman with child, a miscarriage taketh place, and both mother and child are destroyed'.

In the medieval world, the Evil Eye, or the *oculus fascinus*, played a prominent part in everyday life. It occasioned plague, smallpox and cholera. Contagion was transmitted by the glance of the afflicted. Several medieval writers wrote about the Evil Eye. A work known as the *Malleus Maleficorum* (1489), which was the official text-book of the Inquisition, served as a guide to the interesting subject of the discovery, examination, torture, trial and execution of witches. It has the following long-winded reference to the Evil Eye: 'It may so happen that if a man or woman gaze steadfastly at some child, the child, owing to its power of sight and power of imagination, may receive some very sensible and direct impression. An impression of this kind is often accompanied by a bodily change, and since the eyes are one of the tenderest organs of the body, therefore they are very liable to such impressions . . . and so it may happen that some angry and evil gaze, if it has been steadfastly fixed and directed upon a child, may so impress itself upon the child's memory and imagination that it may reflect itself in the gaze of the child and actual results may follow, as, for example, he may lose his appetite and be unable to take food, or he may sicken and fall ill . . . .'

During the Renaissance, a Spanish physician called Gutierrez, believed that fascination produced a characteristic syndrome viz. loss of colour, heavy and melancholy eyes with tearfulness or unnatural dryness, frequent sighs, a depression of spirits, apprehension, bad dreams and loss of weight—a pretty good description of the hyper-ventilation syndrome! Things were seriously written about the Evil Eye as late as 1800.

In modern Arabia, China and Turkey, it is still a hazardous undertaking to praise a horse or camel. In parts of Europe, when looking at a child, it is usual to add 'God bless it'. Among the Italians the *jettatore di bambini* (fascinator of children) is especially feared. A famed fascinator was Pope Pius IX (died 1878). Kaiser Wilhelm was also believed to possess an Evil Eye. An instance is recorded in England, perhaps 30 years ago, where a woman with a squint requested operation, because at her sight, people would cross their fingers, spit ceremonially, and even ask her for spells to stop babies getting bronchitis. It is perhaps credible that certain people wear spectacles for no other reason than to protect themselves from the Evil Eye.[3] In India, all witches and wizards are said to be possessors of the Evil Eye, and foreigners particularly are believed to have the power of fascination.

The belief in the Evil Eye appears to be limited to the East and to the cultures that sprung from the East. It is not found among the Indians of the Americas or among the Bantu of Africa unless there has been some Mohammedan influence. Gelfand,[4] in his book on the magic of the Mashona, refers only once to the Evil Eye.

AVERTING THE EVIL EYE

In all ages the commonest means of averting the Evil Eye was by means of an amulet. The origin of this term is unknown, but it might be derived from the Latin *amoletum* (means of defence). An amulet is an object endowed with magical powers, and uses these powers ceaselessly on behalf of its owner—whether it is carried on his person or placed in his house or among his possessions. It protects him and his belongings from the Evil Eye and from malign influences in general. A talisman on the other hand is an amulet with a specific and limited function, e.g. that of increasing fertility. The origin of this term is also uncertain. Sexual talismans were common in antiquity.

It might be expected that a picture of an eye with the effects of good or white fascination might serve admirably as an amulet against the Evil Eye. This is in fact the case. The Egyptians made use of an eye as an amulet, and through some means it exerted protection from fascination. In addition it typified good health and good fortune generally. This ocular symbol, called an *udjat*, looked like this: Enormous numbers of udjats have been found in tombs. They were made of gold, silver, copper, stones, wood or wax. And somehow this *udjat* bears a relation to the eye of Horus, a child-God who lost his eye as a result of an attack by the evil Seth. In the middle ages, the *udjat*, or perhaps the eye of Horus, reappeared in a new form resembling the numeral 4, and doctors and alchemists scribbled it on prescriptions to invoke the aid of Jupiter.[1] The similarity between the udjat and the familiar ℞ is readily apparent, and it is quite conceivable that they are related, so that the modern doctor in prescribing the very latest in -mycins, is still invoking the aid of an amulet against the Evil Eye.

Texts from the Koran are commonly used as amulets against the Evil Eye. They are painted on houses or carried on the person. In the 18th century, an eminent Talmudist, Jonathan Eyberschütz (1690-1764) dispensed a number of amulets against the Evil

Eye in Metz, Hamburg, and other cities over which he prededsi as chief rabbi. He prepared amulets for expectant mothers and sick children and as remedies against epilepsy and nose-bleeding.

In the Near East, alum is a favourite means of protection against the Evil Eye. Bits of alum are placed in the child's garment. Various stones are highly effective. Indians and Persians consider that wearing an onyx eases the pangs of labour. In the Near East the blood-stone counteracts fascination. Jaspis, a jade-like stone, was also effective and at the same time helped pregnant women and increased the milk of nursing mothers. Amulets of malachite are common in the East and West, and when attached to the necks of children the stone protects them from the Evil Eye and eases their pain when cutting teeth. In some parts of Europe people believe that if a piece of malachite is tied over the umbilicus of a woman in labour it will facilitate the birth of her child. Milk stone is used as an amulet to protect children, and women wore it when suckling their babies. Near Bethlehem there is a 'milk grotto' where a drop of milk from Mary is believed to have fallen on the ground while she was suckling Jesus, and milk dust (suspended in water) from this grotto is used by Christian and Moslem mothers in order to increase lactation.

Spitting in a baby's face was a frequent method of averting fascination. Greek nurses commonly spat towards approaching strangers in order to protect the infant should the stranger have an Evil Eye.[5] Protection of children could be afforded simply by disguising them. A simple method for a boy was to dress him in girl's clothes, or to put rags on him, thus making him undesirable. They might be called unpleasant names, or even have their names changed. It is interesting that Hebrew folklore relates that Noah was not known by that name to his contemporaries. His grandfather Methuselah, knowing of the great mission awaiting him, and doubtless fearful for his safety, suppressed his real name, and called him Menahem instead.[6]

Inscriptions on amulets were sometimes intended to cure one particular disease. Thus the formula *Shebriri* was used to heal diseases of the eye and to act as an influence against the Evil Eye. It had to be pronounced according to this scheme: *Shebriri, Briri, Riri, Iri, Ri, I.* Similar is the magic term *Abracadabra*, which was used for reducing fever. As the letters were reduced, so the fever would abate. It was pronounced *Abracadabra, Abracadabr, Abracadab, Abracad, Abrac, Abr, Ab, A.* The term is possibly derived from the Chaldeic *Abda kedabra* (perish like the word).

On a number of occasions the *Bible* itself refers to the Evil Eye, while also noting the potential injurious effects of eyes. Prov. 28 : 22 notes the Evil Eye, as does Matt. 6 : 23, Mark 7 : 22 and Luke 11 : 34. Prov. 23 : 6 advises: 'Eat thou not the bread of him that hath the Evil Eye.'

A number of non-specific references to personalized eyes and evil eyes are to be found in Deut. 15 : 9, 28 : 54, Job 7 : 8, Ps. 33 : 8, 34 : 15, 35 : 21, 54 : 7, 59 : 10, 92 : 11 and Matt. 20 : 15. We note that when David became too popular, 'Saul eyed David from that day and forward' (1 Sam. 18 : 9). Isaiah thunders (13 : 17-18): 'Behold, I will stir up the Medes against them . . . and they shall have no pity on the fruit of the womb; their eye shall not spare children'; while Ezek. 9 : 5 orders ' . . . smite; let not your eye spare'. Deut. 18 : 10 refers to fascinators or enchanters, while 2 Kings 21 : 6 notes that the evil King Manasseh 'used enchantments', both terms being derived from that for 'serpent'.

There is a belief that the matriarch Sarah had an evil eye. When Hagar fell pregnant and became arrogant to her mistress, Sarah caused her to be banished, during which period she had a miscarriage. When she returned, she again became pregnant and gave birth to Ishmael. When he in turn displeased Sarah, she had him and Hagar sent into the desert, where he became ill with thirst and fever as a result of the influence of her evil eye[6].

ADDENDUM

A personal note may perhaps not be out of place. I was born in a small village in Lithuania, and as an infant I was sometimes afflicted with the Evil Eye of an old woman bearing the name of Faigeh Haiah Nahash. Oddly enough, the name *Nahash* means 'serpent' in Hebrew. Now when Mrs. Nahash entered a household in which there was a child, she would preface her entry with a quick remark: 'Don't worry, I won't give him an evil eye.' Nevertheless, she was not trusted, and when she left, it was usual to spit 3 times on the ground. When she saw me, I would often begin to cry or yawn, and if this was unduly prolonged, my grandparents would consider it necessary to break the spell (*opshprehen an avin hara*). This was done by bringing a handkerchief to the beadle of the local synagogue (the *shamash*), who would then whisper some magical words into it and give the instructions, 'Now hurry home, speak to nobody, and place the handkerchief on his forehead, and the effects of the evil eye will be nullified. Should you speak even one word on the way home, the spell will be broken'.

I have never in practice come across a clinical instance of the effects of an Evil Eye. However, when I am seeing a sick child, should a foreign-born grandmother be present and she ask the cause of the illness, I sometimes put my tongue in my cheek and blandly suggest an Evil Eye. Invariably the response to this is a moment's incredulity followed by smiles or laughter.

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MATERNAL MORTALITY

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In a recent issue of the *Journal of the Royal Institute of Public Health*[1] under the heading 'Maternal Mortality Decreasing' there is a summary of a Report of the World Health Organization which consisted of a statistical review of Maternal Mortality[2] in 49 countries and territories, giving details which are not otherwise readily available.

At the South African Medical Congress in Durban, (September 1957), Dr. A. J. Wrigley contributed an extremely valuable paper under the title 'A critical review by the Ministry of Health of England and Wales' of the Report on a thousand maternal deaths'.[3]

With the help of Prof. E. D. Cooper, Medical Officer of Health, Cape Town, who takes a great interest in this subject, I have been able to get statistics of the Maternal Mortality of the City of Cape Town.

It is proposed to review some of the statistics in the articles referred to and to compare them with figures for our own country.

The British Report

The opening paragraph of Dr. Wrigley's paper will serve well as an introduction: 'Three hundred years ago, in 1660, from information supplied by Sir James Y. Simpson and E. V. Sieveking, the maternal mortality rate in London was about 1 in 40 births, and one hundred years later only about half the figure. A century ago a distinct improvement had occurred, for only about 1 in 200 women died in childbirth in England and Wales, a rate in modern terminology of 5 per 1,000 live births. We are about to consider a survey of the causes of over 1,000 maternal deaths when the rate over a period of 3 years was slightly over one-tenth of that figure.'

' . . . 1,410 deaths reviewed in this Report (representing some 80% of all maternal deaths) . . . occurred in England and Wales during the 3 years 1952-54; 25 years ago a similar number of deaths would have occurred in 6 months instead of 3 years. It was in spite of this tremendous improvement, and in the belief that still more might be accomplished that the present inquiry was initiated.'

' . . . The closing note of this Review . . . is to give emphasis to what (in my opinion) is the most important lesson to be learned from the Report. The suggestion is made that, as a result of many pointers, of which this . . . Report . . . is one, consideration should

be given to the advisability of an altered outlook on prenatal care.'[1]

WHO Report

The following are some figures taken from the WHO Vital Statistics Report:

MATERNAL MORTALITY PER 1,000 LIVE BIRTHS

	1936-38	1955
Australia	5·1	0·6
Austria	5·5	1·1
Belgium	4·2	0·8
Canada	3·9	0·8
Ceylon	20·5	4·1
Chile	9·2	2·8
Denmark	3·5	0·5
England & Wales ..	3·4	0·7
Finland	5·0	1·0
France	1·4	0·6
Germany	4·7	1·6
Italy	2·7	1·3
Japan	2·5	1·8
Netherlands ..	2·8	0·6
Norway	2·7	0·7
Portugal	4·1	1·5
Scotland	5·1	0·5
Sweden	2·9	0·5
United States		
White	4·4	0·3
non-White	8·9	1·3

The Editor of the *Lancet* has said, 'The solution of most of the problems of clinical and preventive medicine must ultimately depend on figures,' and he added that, much as statistics are disliked, the best possible use must be made of them.

One or two points in this Report seem to stand out. The most spectacular decrease in maternal mortality is apparent in countries undergoing rapid development. In Ceylon, for instance, the drop has been from 20·5 in 1936 to 4·1 in 1955. The rapid decrease in diseases due to maternity or 'associated' with this condition is remarkable. One of the chief factors causing this almost incredible improvement is the medical care given during pregnancy and at the confinement, and the great advances in treatment.

A number of interesting figures are given in this survey in this connection. In Japan 13% of women are attended by a doctor at childbirth and 82% by a midwife; in Portugal 6% by a doctor and 23% by a midwife; in Italy 3% by a doctor and 86% by a midwife; in Scotland 96% by a doctor and 3% by a midwife.

A section of this WHO Report deals with the important question of maternity hospitals. The percentage of deliveries which are conducted in institutions in certain countries is set out below, together with the maternal mortality as shown in the previous table:

	Deliveries in Institutions	*Maternal Mortality*
USA (White mothers)	97%	0·3
Sweden	87%	0·5
England & Wales ..	64%	0·7
Italy	22%	1·3
Japan	14%	1·8
Portugal	11%	1·5

These figures appear to indicate that a lower maternal mortality is favoured when deliveries are conducted in maternity hospitals.

Maternal Mortality in South Africa

The following are the maternal mortality figures of Cape Town for the 10 years 1948-57 (kindly supplied by Dr. Cooper).

In making comparisons it must be borne in mind that these figures refer to a single city, whereas those in the WHO report apply to whole countries.

The Cape Town Municipality has a highly organized and successful antenatal department, which must, in part, be responsible for the low maternal mortality rates. These also reflect credit on medical practitioners and midwives in Cape Town, whose work is often carried out under unfavourable conditions. It is remarkable how puerperal sepsis has almost disappeared from the list of causes of death; it practically only proves fatal when associated with abortion.

There is, however, a warning in that some of the figures are too high, especially where non-European mothers are concerned.

CITY OF CAPE TOWN MATERNAL MORTALITY, 10 YEARS 1948-57

5th Revision International List, 1948-53	*6th Revision International List 1954-57*	*Eur.*	*non-E*	*Total*
Puerperal septicaemia (including post-abortive infection)	640, 641, 651, 681, 682, 684 — Puerperal septicaemia (including abortion with sepsis)	6	36	42
Abortion, ectopic gestation and haemorrhages of pregnancy	650 — Abortion without mention of sepsis or toxaemia	1	46	47
Toxaemias and other diseases and accidents of pregnancy	642, 652, 685, 686 — Toxaemia of pregnancy and the puerperium	12	51	63
Puerperal haemorrhage	643, 644, 670–672 — Haemorrhage of pregnancy and childbirth	4	26	30
Other puerperal accidents and diseases	645–649, 673–680, 683, 687–689 — Other complications of pregnancy, childbirth and the puerperium	3	16	19
Annual Maternal Mortality Rate Per 1,000 Live and Still Births*		0·72	1·65	1·41
Annual Maternal Mortality Rate Excluding Abortion*		0·58	1·15	1·00

* Arithmetic mean of the 10 annual rates. The inclusion of stillbirths in the calculation gives a rate 3 or 4% less than when it is calculated on live births only.

In Cape Town the non-European maternal mortality rate is more than double the European. The figures for the Union of South Africa as given in the last Annual Report of the Department of Health[4] are as follows:

MATERNAL MORTALITY PER 1,000 LIVE BIRTHS

	Europeans	*Asiatics*	*Mixed & Other Coloured*
1949	1·13	1·50	2·41
1950	0·95	3·21	2·65
1951	1·12	2·77	2·49
1952	0·98	3·04	2·67
1953	1·20	3·33	2·24
5 years	1·08	2·77	2·49

Lack of Maternity Hospital Beds in Cape Town

An important cause of the high mortality rate where non-European mothers are concerned is the fact that sufficient maternity hospital beds are not available. It is the duty of the Provincial Administrations to supply this life-saving protection to all those requiring it. Apart from the many mothers who cannot obtain admission to a maternity hospital, in many cases the mother who has been admitted has to be sent home within a few days of the birth because of the shortage of beds. There may be no hardship or danger in this if it does not imply an early return to crowded slum conditions, and provided also that satisfactory nursing and domestic service are available in the home. It often happens, however, that though no maternal mortality may result, the health of the mother and child is jeopardized by the lack of nursing care and proper feeding owing to poor home conditions.

The solution of the problem of preventible maternal mortality is the provision of an adequate number of maternity hospitals and efficient antenatal care.

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OFFICIAL ANNOUNCEMENT : AMPTELIKE AANKONDIGING

AMENDMENT OF ARTICLES OF ASSOCIATION

The following amendments of the Articles of Association of the Medical Association of South Africa, passed as a special resolution at an Extraordinary General Meeting held in Cape Town on 9 April 1958 and registered on 6 May 1958 by the Registrar of Companies, are published for general information:

I. That *Article* 9 be and is hereby cancelled and deleted and that the following new Article 9 be and is hereby substituted therefor:

'9 (*a*) The Council (i.e. the Federal Council of the Association referred to and defined in Article 1) shall have power on the representation of any Division or Branch and after due enquiry by such Division or Branch either through their respective Ethical Committees or, failing such Committee in the case of any particular Division or Branch, through the relevant Executive Committee (in the case of a Division) or through the relevant Branch Council (in the case of a Branch), to expel from membership of the Association any Member of such Division or Branch (as the case may be) whose conduct shall be held by the first aforesaid Council to have been such as to render him liable to expulsion under paragraph (*d*) of the last preceding Article; provided

(i) that before passing any resolution expelling such Member the said first aforesaid Council shall have satisfied itself that the Member concerned had, by registered prepaid letter, directed to his last known address, received adequate notice of the allegations made against him and of the time and place of the enquiry held in regard thereto by the relevant Ethical Committee, Executive Committee or Branch Council, as the case may be, and further that he had been given an opportunity of defending himself before such Ethical Committee, Executive Committee or Branch Council, as the case may be;

(ii) that the Member concerned has by further registered prepaid letter directed to him as aforesaid at least 28 days before the date of the meeting of the first aforesaid Council, been notified in writing of the representation made by the said relevant Ethical Committee, Executive Committee or Branch Council, as the case may be, and has been invited to submit by registered prepaid letter directed to the Secretary of the Association, at the latest 14 days before the said date of the meeting of the first aforesaid Council, for its consideration, such counter-representations in writing in his defence as he may wish to make; and further

(iii) that in case in his aforesaid counter-representation he has made a request to that effect, he has been given an opportunity of being heard in person in his own defence by the said first aforesaid Council.

9(*b*) A majority of two-thirds of those present and voting at a meeting of the first aforesaid Council shall be required for the purpose of exercising the powers of expulsion conferred on the first aforesaid Council by the preceding paragraph of this Article;

9(*c*) Any Member who has been expelled from membership in terms of this Article shall, notwithstanding that he has ceased to be a Member, be liable to pay all sums due by him to the Association, or to any Division or Branch thereof, at the time of his expulsion;

9(*d*) No Member whose conduct is under investigation or whose conduct is the subject of enquiry as aforesaid, or in regard to whom a representation as aforesaid has been made to the first aforesaid Council shall be capable of effectively resigning his membership of the Association, nor shall his membership be terminated in pursuance of any By-law until the investigation or enquiry is completed and the decision of the first aforesaid Council is made known. An investigation or enquiry shall, for the purpose of this Article be deemed to commence at the time when the matter of such investigation or enquiry is first brought officially to the notice of the Member by the Ethical Committee or Executive Committee of the relevant Division or by the Ethical Committee or Council of the relevant Branch—as the case may be—by the direction to him of the registered prepaid letter first referred to in paragraph (*a*) of this Article.'

II. That paragraph (*c*) of *Article* 10 be and is hereby cancelled and deleted and that the following new paragraph (*c*) be and is hereby substituted therefore:

WYSIGING VAN STATUTE VAN OPRIGTING

Die volgende wysigings in die Statute van Oprigting van die Mediese Vereniging van Suid-Afrika is in die vorm van 'n spesiale besluit op 'n buitengewone algemene vergadering wat te Kaapstad op 9 April 1958 gehou was, aangeneem. Die wysigings is op 9 Mei 1958 deur die Registrateur van Maatskappye geregistreer en word vir algemene inligting gepubliseer:

I. Dat *Artikel* 9 hierby gekanselleer en geskrap word en dat dit deur die volgende nuwe Artikel 9 vervang word:

'9(*a*). Op vertoë van enige afdeling of tak en na behoorlike ondersoek deur sodanige afdeling of tak deur òf hul onderskeie Etiese Komitees òf, waar sodanige Komitee in die geval van enige besondere afdeling of tak ontbreek, deur die betrokke Uitvoerende Komitee (in die geval van 'n afdeling) of deur die betrokke Takraad (in die geval van 'n tak), het die Raad (d.i. die Federale Raad van die Vereniging waarna verwys en wat omskrywe is in Artikel 1) die mag om enige lid van sodanige afdeling of tak (soos die geval mag wees) wie se gedrag deur laasgenoemde Raad as sodanig beskou word dat hy kragtens paragraaf (*d*) van die hieraan voorafgaande artikel geskrap kan word, finaal as lid van die Vereniging te skrap; op voorwaarde egter

(i) dat alvorens enige besluit aangeneem word waardeur sodanige lid geskrap word laasgenoemde Raad tevrede gestel is dat die betrokke lid voldoende kennis, deur aangetekende vooruitbetaalde brief na sy laaste bekende adres gerig, ontvang het van die beweringe teen hom gemaak en van die tyd en plek van die ondersoek in verband daarmee deur die betrokke Etiese Komitee, Uitvoerende Komitee of Takraad, soos die geval mag wees, en verder dat aan hom 'n geleentheid gegee was om homself voor sodanige Etiese Komitee, Uitvoerende Komitee of Takraad, soos die geval mag wees, te verdedig;

(ii) dat die betrokke lid, deur 'n verdere aangetekende vooruitbetaalde brief wat aan hom soos voormeld gerig is minstens 28 dae voor die dag van die vergadering van laasgenoemde Raad, skriftelik in kennis gestel is van die vertoë wat deur die betrokke Etiese Komitee, Uitvoerende Komitee of Takraad, soos die geval mag wees, gerig is en uitgenooi is om skriftelik, per aangetekende vooruitbetaalde brief wat ten minste 14 dae voor die voormelde datum van die vergadering van voormelde laasgenoemde Raad aan die Sekretaris van die Vereniging gerig is, sodanige teenvertoë soos hy tot sy verdediging mag verkies vir oorweging deur die Raad in te dien; en verder

(iii) dat, ingeval hy in sy voormelde teenvertoë 'n versoek tot dien effekte gedoen het, hy 'n geleentheid gekry het om persoonlik tot sy eie verdediging gehoor te word deur voormelde laasgenoemde Raad.

9(*b*) 'n Meerderheid van twee-derdes van diegene wat aanwesig is en stem op 'n vergadering van die voormelde laasgenoemde Raad word vereis vir die uitoefening van die magte van skrapping wat deur die voorafgaande artikel van hierdie Statuut aan voormelde Raad verleen is.

9(*c*) Enige lid wat in terme van hierdie artikel van sy lidmaatskap geskrap is, nieteenstaande dat hy opgehou het om lid te wees, is aanspreeklik vir die betaling van alle gelde deur hom aan die Vereniging verskuldig, of aan enige afdeling of tak daarvan, ten tyde van sy skrapping.

9(*d*) Geen lid wie se gedrag ondersoek word, of wie se gedrag die onderwerp van ondersoek soos voormeld is, of ten opsigte van wie vertoë soos voormeld tot die voormelde Raad gemaak is nie, word toegelaat om daadwerklik as lid van die Vereniging te bedank nie, nòg kan sy lidmaatskap beëindig word ingevolge enige Verordening, tot tyd en wyl ondersoek of navraag afgehandel is en die besluit van die voormelde Raad bekend gemaak is. 'n Ondersoek of navraag word vir die doel van hierdie artikel beskou om te begin op die tyd wanneer die ondersoek of navraag die eerste maal amptelik tot die kennis van die lid deur die Etiese Komitee of Uitvoerende Komitee van die betrokke afdeling, of deur die Etiese Komitee of Raad van die betrokke tak, soos die geval mag wees, gebring word deur die rigting aan hom van die aangetekende vooruitbetaalde brief waarna eerstens in paragraaf (*a*) van hierdie artikel verwys is.'

II. Dat paragraaf (*c*) van *Statuut* 10 hierby gekanselleer en geskrap word en dat dit deur die volgende nuwe paragraaf (*c*) vervang word:

'(*c*) Notwithstanding the provisions of the preceding subparagraphs (*a*) and (*b*) and without derogating from the provisions of Articles 11 and 16, no body of Members shall be finally recognised as a Division or Branch until they have complied with such conditions, if any, as regards the adoption of Rules of Organization as the Council may reasonably impose.'

III. That the following new Articles numbered respectively 29*bis* 29*tres* and 29*quat*, shall be and are hereby added to and inserted in Articles of Association immediately following the existing Article 29, namely:

'29*bis*. Without derogating from the general powers vested in the Council under Articles 28 and 29 and notwithstanding anything to the contrary contained or implied in any Regulation, By-law or Rule, for the better attainment of the objects of the Association in regard to the maintenance of the honour and interests of the Medical Profession or Association it shall in particular be competent for the Council to make and/or adopt Rules governing the ethical and/or professional conduct of individual Members of the Association by way of resolution carried by a majority of not less than two-thirds of the votes given thereon in the manner prescribed by the Regulations or By-laws—in the latter case in so far as not inconsistent with the former.

29*tres*. Complementary to the provisions of Article 29*bis* it shall also be competent for the Council to make and/or adopt Rules of procedure governing enquiries into complaints regarding the ethical and/or professional conduct of individual Members of the Association, by way of resolution passed by a simple majority of the votes given thereon in the manner prescribed by the Regulations or By-laws—in the latter case, in so far as not inconsistent with the former.

29*quat*. Insofar as there may at any time or from time to time be found to be any inconsistency or conflict between any relevant Rule of the Council as to ethical and/or professional conduct or as to the procedure to be followed in conducting any enquiry into complaints regarding ethical and/or professional conduct and any Rule which may have been passed or which may hereafter be passed by any Division or Branch, the Rule of the Council shall prevail, shall be of force and effect and shall be regarded as the Rule binding on all Divisions and Branches of the Association to the exclusion of any conflicting Rule of any Division or Branch.'

IV. That *Article* 30*bis* be and is hereby cancelled and deleted.

By Order of the Council,

A. H. Tonkin
Secretary

Medical House
35 Wale Street
Cape Town
5 June 1958

,(*c*) Nieteenstaande die bepalings in die voorafgaande onderparagrawe (*a*) en (*b*) en sonder om af te doen van die bepalings van artikels 11 en 16, sal geen liggaam van lede finaal as 'n afdeling of tak erken word nie voordat hulle voldoen het aan sodanige voorwaardes, indien enige, ten opsigte van die aanvaarding van Reëls van organisasie soos die Raad redelik mag oplê.'

III. Dat die volgende nuwe Statute respektieflik genommer 29*bis*, 29*tres* en 29*quat* hierby toegevoeg word en opgeneem word in die Statute van Oprigting onmiddellik volgende op die bestaande Statuut 29, naamlik:

,29*bis*. Sonder om af te doen aan die algemene magte wat aan die Raad toegeken is onder Statute 28 en 29 en nieteenstaande enigiets teenstrydigs vervat of behels in enige Reglement, Verordening of Reël vir die beter bereiking van die doeleindes van die Vereniging wat betref die handhawing van die eer en belange van die mediese beroep of Vereniging sal dit besonderlik in die bevoegdheid van die Raad lê om Reëls te maak en/of aan te neem wat die etiese en/of professionele gedrag van individuele lede van die Vereniging beheers deur 'n besluit wat aangeneem word deur 'n meerderheid van nie minder nie as twee-derdes van die stemme daaroor op die wyse soos deur die Reglemente of Verordeninge voorgeskryf—in die laaste geval insover dit nie in stryd is met eersgenoemde nie.

29*tres*. Aanvullend by die bepalings van Statuut 29*bis* sal die Raad ook die bevoegdheid hê om Reëls van prosedure te maak en/of aan te neem vir die ondersoek na klagtes insake die etiese en/of professionele gedrag van individuele lede van die Vereniging deur middel van 'n besluit aangeneem eenvoudig deur 'n meerderheid van die stemme daaroor op die wyse soos deur die Reglemente of Verordeninge voorgeskryf—in die laaste geval in sover dit nie in stryd is met eersgenoemde nie.

29*quat*. Insover daar te eniger tyd of van tyd tot tyd enige ongerymdheid of teenstrydigheid gevind mag word tussen enige betrokke Reël van die Raad ten opsigte van die etiese en/of professionele gedrag of ten opsigte van die prosedure wat gevolg moet word by die ondersoek van klagtes insake etiese en/of professionele gedrag en enige Reël wat miskien deur enige afdeling of tak aangeneem is of hierna aangeneem mag word, sal die Reël van die Raad geldig, van krag en in werking wees en sal beskou word as die Reël wat alle afdelings en takke van die Vereniging bind, met uitsluiting van enige strydige Reël van enige afdeling of tak.'

IV. Dat artikel 30*bis* hierby gekanselleer en geskrap word.

Op las van die Raad,

A. H. Tonkin
Sekretaris

Mediese Huis
Waalstraat 35
Kaapstad
5 Junie 1958

IMPORT OF MEDICAL AND SURGICAL INSTRUMENTS AND APPARATUS : INVOER VAN GENEESKUNDIGE EN CHIRURGIESE INSTRUMENTE EN APPARAAT

The attention of medical practitioners is called to the fact that the importation of medical and surgical instruments and apparatus is still subject to import control, and that permits are required before such goods may be imported.

Pursuant to Government Notices Nos. 1918 and 1919 of 6 December 1957, permits were required to import medical, surgical and dental requisites. These notices have been replaced by Government Notice No. 624 of 2 May 1958, which does not, however, alter the position as far as medical requisites are concerned. The regulations provide for the issue of permits only to registered importers, but the Medical Association has been assured that the requirements of medical practitioners will be met.

Applications for permits, giving full particulars of the instruments or apparatus required, the price, and the name and address of the firm from which the goods are to be purchased, must be addressed to the Director of Imports and Exports, Private Bag 192, Pretoria.

Die aandag van geneeshere word daarop gevestig dat die invoer van geneeskundige en chirurgiese instrumente en apparaat nog steeds onderhewig is aan invoerbeheer, en dat permitte nodig is voordat sulke goedere ingevoer kan word.

Ooreenkomstig Goewermentskennisgewings nrs. 1918 en 1919 van 6 Desember 1957 was permitte nog nodig om geneeskundige, chirurgiese en tandheelkundige benodigdhede in te voer. Hierdie kennisgewings is vervang deur Goewermentskennisgewing nr. 624 van 2 Mei 1958 wat egter nie die posisie met betrekking tot geneeskundige benodigdhede verander het nie. Die regulasies maak slegs voorsiening vir die uitreiking van permitte aan geregistreerde invoerders, maar aan die Vereniging is die versekering gegee dat in die behoeftes van geneeshere voorsien sal word.

Aansoeke om permitte, met volle besonderhede van die instrumente of apparaat wat benodig word en die prys en die naam en adres van die firma van wie die goedere gekoop gaan word, moet gerig word aan die Direkteur van Invoer en Uitvoer, Privaatsak 192, Pretoria.

PARTNERSHIPS IN RELATION TO HOSPITAL APPOINTMENTS IN THE TRANSVAAL

Dr. P. D. Combrink, Assistant Secretary (Transvaal), Medical Association of South Africa writes as follows: Some time ago it was brought to the notice of the Augmented Executive Committee (Transvaal) that certain applicants for part-time appointments in Transvaal public hospitals, because of the fact that during their interviews with the Board of the hospital concerned, they were asked if they had a partner already holding an appointment in the Hospital, felt that, if this was the case, the possible success of their application for the post was prejudiced. They were of the opinion that some Hospital Boards did not fully understand the directive issued by the Hospital Services Department regarding its policy in connection with partnership appointments, and submitted that some Hospital Boards were under the erroneous impression that, regardless of the merits of the various applicants, an applicant with a partner already holding an appointment in the Hospital, was automatically debarred from obtaining an appointment in that Hospital.

The Committee thereupon approached the Director of Hospital Services with the request that his department should issue a further directive to all Hospital Boards to clarify the position, so as to ensure that they were aware of the fact that the policy of his department was that recommendations should be made primarily on merit, and only if there were two applicants of equal merit, the one with a partner holding an appointment in the same hospital and the other without, should the one without a partner receive preference.

The Director, in a letter dated 2 April 1958, replied that in his opinion it was not necessary to elucidate further on the matter to Hospital Boards as the circular previously issued to them made the position quite clear.

When the matter was again considered by the Augmented Executive Committee at its meeting held on 26 May 1958, it was agreed that the publication in the *Journal* of the circular concerned, namely Hospital Circular No. 39 of 1956, as well as the letter received from the Director, would make the position clear to all members of the Association, and would dissipate the feeling held by some that if they had a partner already holding a part-time appointment in a particular hospital, it would automatically debar them from obtaining a part-time appointment in the same hospital.

Hospital Circular No. 39 *of* 1956

'1. As all Hospital Boards are no doubt aware, it is the accepted policy of the Administration, all things being equal, not to offer more than one part-time medical appointment to any medical practitioner or to appoint partners to the same hospital, if there is more than one available suitable applicant.

2. In this connection, the following procedure should be adopted:

(*a*) The fact that an applicant already holds another part-time medical post should not in any way influence a Board when considering the filling of a particular post;

(*b*) Should a Board decide to recommend an applicant who already holds a part-time medical post, it should ascertain from him whether he is prepared to relinquish his present post, should he be appointed to the post under consideration;

(*c*) If the applicant is prepared to relinquish his present post, the Administration should be advised of this fact when the Board's recommendations for the filling of the post are submitted;

(*d*) If the applicant is not prepared to give up his present post, the Board should make a further selection from the applicants, if there are suitable candidates left over. Should the remaining applicants be not considered suitable for appointment to the particular post, the Board may still recommend the applicant (who already holds a part-time medical post), but in such a case it should state *fully* why the recommended applicant is preferred and why the other applicants are not considered suitable for appointment to the particular post. The Board's representations will then receive careful consideration but no guarantee can be given that the Board's recomendation will be accepted.

(*e*) Should there be only one applicant and should he hold another part-time post, it will not be necessary to approach him as set out above, should a Board wish to recommend him for appointment to a post;

(*f*) In the case of the appointment of partners, Boards should, when submitting recommendations for the filling of part-time medical posts, state whether applicants recommended for appointment are partners of any part-time medical practitioners already on the staff of the hospital. If that is the case, the Board should state fully why the applicant is recommended in preference to any other available applicants who do not hold part-time appointments or who are not partners of part-time medical practitioners already on the staff.'

Letter from the Director

'With reference to your letter of 25 February, addressed to the Deputy Director of Hospital Services, Dr. Retief, I have to state that in my opinion it is not necessary to withdraw Hospital Circular No. 39 of 1956, or to elucidate on the matter further to Hospital Boards.

The policy of this Administration in regard to partnerships is as follows:

Hospital Boards, when considering applications, should make their recommendations on the merit of the case. If the recommended applicant has a partner already on the staff of the same hospital for which he is applying for a post, the Board should inform this Administration of this fact and the reasons why a suitable applicant not holding a partnership, is not recommended.'

Conclusion of Dr. Combrink's letter

I think what is to be made quite clear to members of the Association is that the Association itself is not desirous of having partners serving in a hospital where such can be avoided, and further, if one partner holds an appointment in a public hospital, there is no reason why another partner should not be appointed to another hospital.

PASSING EVENTS : IN DIE VERBYGAAN

Mr. Felix Machanik, M.B., B.Ch. (Rand), M.Ch.Orth. (L'pool), Consultant Orthopaedic Surgeon, has changed his consulting rooms to Room 5, West Wing (3rd Floor), Clarendon Centre, Clarendon Circle, Johannesburg. His new telephone number is 44-0956/7/8.

Dr. Felix Machanik, M.B., B.Ch. (Rand), M.Ch.Orth. (L'pool), Konsulterende Ortopediese Chirurg, het sy spreekkamer verander na die volgende adres: Kamer 5, Westervleuel (3de verdieping), Clarendon Centre, Clarendon Circle, Johannesburg. Sy nuwe telefoonnommer is 44-0956/7/8.

* * *

SKF Laboratories Award for Postgraduate Clinical Study in South Africa. This award has been established by a grant from SKF Laboratories (Pty.) Limited, P.O. Box 784, Port Elizabeth, the South African branch of Smith, Kline and French Laboratories Ltd., London. The Selection Committee (an independent board of medical practitioners) consists of the following: Prof. J. F. Brock (Cape Town), Prof. G. A. Elliott (Johannesburg), Dr. H. A. Shapiro (*Honorary Chairman*, Johannesburg), Dr. M. Shapiro (Johannesburg), Dr. M. M. Suzman (Johannesburg), and Prof. H. W. Snyman (Pretoria). Applications are invited from registered *general practitioners* who have been in active practice in South Africa for at least 7 years. The Bursary is intended for postgraduate clinical study and not for medical research. It is available for not less than a 2-month period at any medical school in South Africa. The total value of the Bursary is £200. The candidate must submit a brief statement of his proposed course of study and indicate the institution at which he intends to undertake it. No payments will be disbursed to the successful applicant until he has satisfied the Selection Committee that he

has been accepted for the period of postgraduate study at a South African medical school.

Applications must be made on the prescribed form, which is obtainable from Dr. H. A. Shapiro, Honorary Chairman, Selection Committee, SKF Laboratories Award for Postgraduate Clinical Study, P.O. Box 1010, Johannesburg. Closing date for applications, 16 August 1958.

* * *

Katherine Bishop Harman Prize. The Council of the British Medical Association is prepared to consider an award of this Prize in 1959. The purpose of the Prize, the value of which is £75, is the encouragement of study and research directed to the diminution and avoidance of risks to health and life in pregnancy and childbearing. It will be awarded for the best contribution (not previously published) submitted in open competition, competitors being free to select the work they wish to present, provided it falls within the scope of the Prize. Any registered medical practitioners in the British Commonwealth and any member of the British Medical Association, wherever resident, is eligible to compete. Should the Council decide that no contribution submitted is of sufficient merit, the Prize will not be awarded for 1959. The decision of the Council will be final. Each contribution must be typewritten or printed in English and must be accompanied by a detachable slip bearing the candidate's name and address. The Council anticipates that the contributions should be between 3,000 and 10,000 words, although no definite limits are laid down. Preliminary notice of entry is required and a form for this purpose can be obtained from the Secretary, B.M.A. House, Tavistock Square, London, W.C. 1, to whom also essays must be forwarded not later than 31 January 1959, and to whom enquiries may be addressed.

* * *

Occupational Health Prize, established for the purpose of encouraging interest and research in the field of occupational health. The Council of the British Medical Association is prepared to consider the award of this Prize, which consists of a certificate and £50, in 1959. Any member of the Association who is engaged in the practice of occupational health, either whole-time or part-time, is eligible to compete. Candidates may select their own subject. Entries should be submitted in a form suitable for publication. Candidates should direct their attention to their own observations rather than to comments on previously published work, though reference to current literature should not be omitted when it bears directly on their results, interpretations and conclusions. No study or essay that has been published in the medical press or elsewhere will be considered eligible, and a contribution offered one year cannot be accepted in any subsequent year unless it includes evidence of further work. A previous prizewinner is not precluded from entering. The decision of the Council on questions of eligibility and admissibility will be final. Each entry must be typewritten or printed on one side only and accompanied by a note of the candidate's name and address. The Council anticipates that contributions should be between 3,000 and 10,000 words, although no definite limits are laid down. Preliminary notice of entry is required on a form of application to be obtained from the Secretary, B.M.A. House, Tavistock Square, London, W.C. 1, to whom enquiries may be addressed.

REVIEWS OF BOOKS : BOEKRESENSIES

APPROACHES TO MENTAL DISEASE

Integrating the Approaches to Mental Disease. Two Conferences Held under the Auspices of the Committee on Public Health of The New York Academy of Medicine. Edited by H. D. Kruse, M.D. Pp. xvi + 393. $10.00. New York: Paul B. Hoeber Inc. 1957.

Contents: Participants. Preface. Introduction. *First Conference.* 1. The Organic Position on Etiology—*Ralph W. Gerard.* 2. The Experimental Psychological Position on Etiology—*Carney Landis.* 3. The Psychodynamic Position on Etiology—*Lawrence S. Kubie.* 4. The Psychosocial Position on Etiology—*Erich Lindemann.* Discussion. 5. Areas of Interdoctrinal Acceptance. Discussion. 6. Areas of Interdoctrinal Unacceptance. 7. Further Interdoctrinal Differences. 8. Evidence of Interrelation Among Doctrines. 9. Searching for Common Ground. 10. Confronting the Communication and Concept Barriers. 11. Next Steps for Further Interrelation, Convergence, and Integration. 12. Multidiciplinary Knowledge and Research. *Second Conference.* 13. The Organic Viewpoint on Mental Disease—*Herbert H. Jasper.* 14. The Psychological Point of View—*B. F. Skinner.* 15. Fundamental Concepts, Basic Principles and Assumptions of the Psychodynamic Position on Mental Disease—*Franz Alexander.* 16. The Psychosocial Position—A Preparatory Statement—*Thomas A. C. Rennie.* 17. Areas of Acceptance. 18. Areas of Unacceptance. 19. Further Areas of Unacceptance. 20. Clinical Principles in the Practice of Psychiatry—Their Clarification, Refutation, or Validation. 21. Additional Clinical Psychiatric Principles. 22. Outline of Critical and Decisive Studies with a Multidisciplinary Approach on Causation of Mental Disease. 23. Further Thoughts on a Multidisciplinary Approach. 24. Cross-Criticism Among Disciplines. 25. Interdisciplinary Differences in Concepts, Values, and Relevance. 26. From the Abstract to the Concrete. 27. The Quest for Hypotheses from the Various Disciplines and Their Influence on the Stimulation of Multidisciplinary Research. 28. Psychoanalytic Technic of Observation and Validation of Hypotheses. 29. The Search for New Technics to Verify Observations and Validate Hypotheses in Psychoanalysis. 30. Collection of Observations and Validation of Hypotheses in the Sociological Approach. 31. The Role of the Basic Scientist in Multidisciplinary Research. Index.

The 48 participants in the two conferences reported in this absorbing volume are eminent psychiatrists and psychologists and a few experts from related fields. The conferences demonstrate very strikingly today's increasing awareness of the unsatisfactory state of theory and practice in the realm of abnormal human behavior.

A *verbatim* account of proceedings has the special virtue that the reactions of the discussants to each other's ideas are preserved with all their nuances. It is an interesting sign of the times that attacks upon the non-scientific character of many of the views held by psychiatrists, especially those of psychoanalytic persuasion, are not superciliously rejected as they would have been a few years ago, but instead evoke admissions (even if sometimes very wry ones) that properly controlled studies are needed.

It is clear from the discussions that the main reasons for the backwardness of psychiatry are failure to give clear definition to terminology, failure to state hypotheses in terms that permit testing, facile acceptance of hypotheses without any testing and poor design of testing operations—so that the investigator deceives himself and others through spurious 'validation'. Many examples of each kind of error are to be found in the book, often in areas that are accepted as 'common knowledge.' The book should not be missed by anybody engaged in psychiatric practice or research.

J.W.

TRAQUAIR'S CLINICAL PERIMETRY

Traquair's Clinical Perimetry. Seventh Edition. By G. I. Scott, M.A., M.B., F.R.C.S. Ed., with a foreword by Norman M. Dott, C.B.E., M.B., F.R.C.S. Ed. Pp. xv + 333. 280 Illustrations including 5 coloured plates. 60s. net. London: Henry Kimpton. 1957.

Contents: Part I. Introductory. I. The Normal Field of Vision. II. Perimetric Instruments. III. Methods of Examination. IV. Physiology of the Visual Field in Relation to Clinical Perimetry. *Part II. Clinical Perimetry.* V. The Function of Perimetry. VI. The Pathological Field. VII. Anatomy of the Visual Pathway. VIII. Interpretation of Changes in the Visual Fields. IX. Choroid and Retina. X. Glaucoma. XI. The Optic Nerve. XII. Chiasma. XIII. The Suprachiasmal Pathway and Visual Cortex. Summary of Affections of the Visual Pathway. XIV. Functional Changes in the Field of Vision. *Appendix.* I. The Size Relative to each other of Arcs, Chords and Tangents subtending the same Angle. II. Isopters for White and Colour in the Normal Field. III. The Blind Spot. IV. Tables of Tangents and Degrees for Use with Bjerrum's Screen. V. Uses of the Perimeter and Screen Otherwise than in Field Testing. Bibliography. Index.

The 7th Edition of this well-known work is the first since the author's death in 1954. It is edited by Prof. Scott of Edinburgh, one-time pupil of Traquair.

The lay-out and content of the book is basically unchanged from the previous edition; the main alterations are to be found in the sections on the anatomy of the visual pathway, on the anterior part of the optic radiations, on glaucoma, on the optic nerve and the chiasma.

The anatomy of the visual pathway is well set out and easy to read. The recent (1957) work of Falconer and Wilson is included to show that they found congruous contralateral homonymous field defects following a series of cases of anterior-temporal lobectomy. Hitherto it had been accepted that field defects resulting from temporal lobe tumours were incongruous. This is particularly interesting as Traquair (1922) held the view that a lesion of the optic radiation could not produce an incongruous defect. His own view was that the incongruity was due to pressure on the optic tract. Falconer's work confirms Spaldings' findings that anatomically the lower fibres of the anterior part of the optic

radiation loop round the tip of the temporal horn of the lateral ventricle.

Throughout, each subject is dealt with in a clear and interesting fashion. There is a wealth of detail in the 333 pages, but at no time is the reader bogged down by unnecessary figures and data. There is a full and useful bibliography of over 20 pages. On page XI a printing error is seen: 'Fig. 10' should read: 'Fig. 12'.

All ophthalmologists, neuro-surgeons and neurologists already have this book. It is strongly recommended to all interested in these fields of medicine.

S.S.

ALLERGY IN PEDIATRICS

Allergy in Pediatric Practice. By William B. Sherman, M.D. and Walter R. Kessler, M.D., Ph.D. Pp. 296. Illustrated. South African Price: £3 18s. 9d. St. Louis: The C. V. Mosby Company. 1957.

Contents: 1. Introduction. 2. Immunology of Allergic Diseases. 3. Nonimmunologic Factors Affecting Allergic Reactions. 4. Drugs Used in the Treatment of Allergy. 5. Anaphylaxis in Pediatric Practice. 6. Serum Sickness and Serum Reactions. 7. The Atopic Diseases. 8. Allergens Causing Atopic Diseases. 9. Diagnosis of the Specific Causative Allergens. 10. Injection Treatment. 11. Allergic Rhinitis. 12. Bronchial Asthma. 13. Atopic Dermatitis—Infantile Eczema. 14. Urticaria and Angioedema. 15. Gastrointestinal Allergy. 16. Allergy of the Eye. 17. Allergy of the Central Nervous System. 18. Contact Dermatitis. 19. Delayed Allergy to Infective Agents. 20. Allergic Purpura. 21. Drug Allergy. 22. Physical Allergy. 23. Allergy in Relation to Collagen Diseases. 24. General Pediatric Care of the Allergic Child. Appendix.

Those of us who are not almost exclusively allergists are still rather hesitant about accepting an allergic basis for the manifold ills of the human race. A certain lurking suspicion persistently suggests that the strange terminology of the allergist is used as a cloak to cover a mass of surmise and as evidence of superior knowledge bordering on the occult. This book does everything possible to dispel such ideas. It is an honest, plainly written, highly interesting account of the part played by allergy in paediatrics. The terms used are defined clearly and no attempt is made to cloak the absence of proof where none is available. Where it is known, the explanation is given and the apposite references are included at the end of each chapter.

The book is easy to read and while plenty of theory is supplied, the whole subject is discussed from the viewpoint of the practising doctor. Procedures of testing, in their many forms, are detailed and illustrated by easily comprehended diagrams and coloured and black and white photographs of the highest quality. The treatments recommended and the drugs likely to be helpful are clearly described. The print is excellent, as is the index.

This would be a valuable addition to the reference library not only of any paediatrician but of any physician, be he a general practitioner or a medical specialist of one kind or another. Well worth its price which, though considerable, cannot be regarded as excessive in view of the current cost of books and especially of authoritative textbooks of this high standard.

F.F.

ELECTROCARDIOGRAPHY

EKG-Fibel. Von Dr. R. Heinecker. Mit einem Geleitwort von Prof. Dr. F. Hoff. xii+200 Seiten. 182 Abbildungen in 308 Einzeldarstellungen und 34 schematische Darstellungen. DM 19.80. Stuttgart: Georg Thieme Verlag. 1956.

Inhaltsverzeichnis: A. Einführung. I. Physiologische und anatomische Grundlagen. II. Zur Technik der EKG-Aufzeichnung. III. Das normale Extremitäten-EKG. IV. Zur Deutung der EKG-Kurve. V. Die Ableitungsprogramme. VI. Entstellung der EKG-Kurve infolge technischer Mängel. *B. Formveränderungen des Elektrokardiogramms.* I. Veränderungen des Vorhofteils. II. Veränderungen, die überwiegend den Kammerteil betreffen. *C. Störungen der Schlagfolge.* I. Störungen, die vorwiegend die Reizbildung betreffen. II. Störungen der Erregungsleitung. III. Der *Stokes-Adams*-Anfall. D. Indikationen zur Benutzung eines über die Standard-Extremitäten-Ableitungen (Einthoven) Hinausgehenden Ableitungsprogramms. Sachverzeichnis.

This primer in electrocardiography amply fulfills its object. It is an excellent booklet, which gives in precise and abbreviated form all the essential data on electrocardiography. The material is clearly presented and the marginal notes are especially helpful in correlating the text with the appropriate illustration or diagram.

The schematic drawings merit very special attention. They lucidly represent closely related electrocardiographic patterns and serve to emphasize the distinctive features of each.

In many of the electrocardiograms bipolar chest leads were taken, as well as the usual standard leads, augmented unipolar extremity lead and the V leads. Although the bipolar chest leads are occasionally helpful, they have not been generally adopted amongst English and American workers. The augmented unipolar limb leads, on the other hand have been generally accepted amongst these workers, and it is a pity that in a number of tracings the aVL leads have been ousted by the bipolar chest leads.

This is, however, only a very minor criticism, and the book is well worth reading. It is written in German.

H.L.

CORRESPONDENCE : BRIEWERUBRIEK

MARSILID IN PSYCHIATRY

To the Editor: During the past 8 months I have used Marsilid in cases of mental depression, with lack of energy and loss of confidence, and even in cases where E.C.T. has failed. I found the treatment highly effective, and even dramatic in its results, in approximately 80% of cases. The effect becomes noticeable after 2-3 weeks.

It is, however, not my intention to discuss here the therapeutic results of the treatment, but rather the side-effects produced by Marsilid. I recently received a circular letter of warning about these side-effects from the representative in South Africa, and it might be interesting to note my experience in this connection.

I used to commence treatment with 25 mg. *t.d.s.* If no side-effects appeared within 5-7 days the dosage was increased to 100 mg. per day in divided doses. According to the development of side-effects, and effectiveness, the dosage is then decreased to a minimal dose and after a period of 2 months gradually decreased to nothing after another month.

The following side-effects were noted:

1. Excessive sweating amounting to acute discomfort at times.
2. Failure of the bowels to act, not as the result of constipation, but possibly of atony of the rectum or weakening of the reflex response.
3. A slow, hesitant stream of urine as in cases of enlarged prostate. Concentrated urine, possibly as the result of excessive sweating.
4. Dizziness with occasional black-outs, due to a sudden postural fall of the blood pressure.
5. An inability to have an orgasm or ejaculation in sexual relations. I have found no cases of impotence in males or frigidity in females, but the male cannot ejaculate and the female is unable to have an orgasm, especially the clitoral type. This fact is interesting because it may open up new avenues in the treatment of cases suffering from ejaculatio praecox.
6. There appears to be a tension of the voluntary musculature. During sleep or relaxation there occur spasmodic contractions of one or both sides of the body; some of these movements resemble Jacksonian epilepsy, without unconsciousness. Patients are often alarmed by this.

I performed no liver tests during the treatment, but have detected no clinical signs of liver damage in any of my patients. Cases of liver damage, however, and even of death from liver necrosis, have been reported.

May I conclude with a warning against the indiscriminate use of Marsilid. Patients should be carefully and regularly observed. It is probably advisable to have regular liver tests done. It is such a simple and effective treatment for certain specific psychiatric conditions that the temptation may arise to use it freely; this I consider a dangerous procedure.

Opsomming

'n Bespreking van kliniese ervaring met die gebruik van Marsilid in sekere spesifieke psigiatriese gevalle, meer in besonder in gevalle van melancholie. In meer besonderhede word die neweeffekte, wat die skrywer kon vasstel by sy pasiënte, bespreek.

D. du Plessis
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17 June 1958

KERLEY'S B LINES

To the Editor: May I have the opportunity of adding a few remarks to your timely editorial on Kerley's B lines?[1]

It was in 1933 that Kerley[2] described the changes of passive hyperaemia in the lung fields in mitral stenosis, as follows:' . . . and the shadows of the perivascular lymphatics persist as fine, sharp lines, most marked at the bases and near the hila.' The recognition of these lines thus dates back 25 years.

It seems as if Kerley erred in regarding them as due to perivascular lymphatics. While usually seen at the costophrenic areas in left heart failure (the B lines), these lines are seen occasionally at the centre of the lung, where they are referred to as A lines; and both the A and B lines are pulmonary septal lines caused by interstitial, extra-alveolar, pulmonary oedema due to pulmonary venous and capillary hypertension.

Their detection is essentially a radiological problem. Since paying special attention to their presence during the last 2 years, I have noted a few cases where the B lines, but not A lines, were present initially during the stage of advanced X-ray signs of left heart failure, but as the central clouding of the lung field cleared, the A lines became visible at a time when the B lines were difficult to detect.

Septal lines may be found in any condition causing pulmonary interstitial oedema, whether due to increased capillary permeability, mediastinal lymphatic obstruction, or increased pulmonary venous and capillary pressure. Associated alveolar pulmonary oedema lessens the radiographic contrast of the septa and their recognition is likely to be more difficult, as in nephritis and pulmonary oedema associated with cerebral trauma.[3]

C. J. B. Muller

206 Dumbarton House
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17 June 1958

1. Editorial (1958): S. Afr. Med. J., 32, 609.
2. Kerley, P. (1933): Brit. Med. J., 2, 597.
3. Grainger, R. G. (1958): Brit. J. Radiol., 31, 20'

KAPOSI'S SARCOMA

To the Editor: In the report on a case of Kaposi's sarcoma by Drs. Uys and Bennett[1] in the *Journal* of 7 June the authors record several interesting observations. In their discussion they state: 'They (Kaminer and Murray) get the impression that it (Kaposi's disease) is more frequently encountered in the Bantu than in the European in South Africa.'

Since the publication of our first observations in 1950 there has now been collected at the Institute a total of 136 cases of Kaposi's sarcoma, of which only 5 occurred in Europeans. Our results show that the condition is definitely observed much more frequently in the Bantu than in the European. It is not possible to determine exact incidence but even if it were assumed that the Institute cases were drawn from the whole European and Bantu population of the Union, the incidence in the Bantu would, on the basis of the Institute figures, be 6 times greater than in the Europeans. This confirms our original impression, and emphasizes that, as Drs. Uys and Bennett's is the first published record of the condition in a Coloured person it must be rare in that race also as compared with the Bantu.

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16 June 1958

1. Uys, C. J. and Bennett, M. B. (1958): S. Afr. Med. J., 32, 577.

TREATMENT OF MONGOLISM

To the Editor: Of late, much interest has been revived in the treatment of mongolism by means of cellular extracts from the endocrine tissues of young animals. These cellular preparations have been used by Dr. Niehans for the past 15 years, and are available in two forms. In the one preparation the fresh cell ('Frischzell') is used, whereas in the other preparation the cells are used after being dried ('Sicca cells'). These forms of treatment have been used by Dr. Niehans and his disciples for the past 15 years, and recently, because of the publicity in the lay press, many parents of mongoloid children have heard of the treatment. They have been given to understand that the treatment offers the chance of mental development beyond what could normally be expected in mongols. Almost daily, paediatricians are being approached for their opinion about this form of therapy, which is costly to the patient. Prof. G. Fanconi, the celebrated Swiss paediatrician, who is also Secretary General of the International Paediatric Association, was approached for his opinion on the matter. In his letter of reply, he denied the efficacy of the Niehans treatment in no uncertain terms, and also sent a copy of previously published notes on the Niehans therapy.[1] The following is a translation of Professor Fanconi's article:

SICCA CELL THERAPY OF NIEHANS

Question: I should like to have your opinion on the so-called Dry Cell therapy of Niehans in certain paediatric conditions, especially those of neuro-degenerative nature (mongolism, Little's disease). Several articles (Destunis, Haubold, Goldstein) in which successful treatment by Sicca cell preparations, is claimed, have come to my notice.

Reply: A similar request was addressed to me by the *Munchner Medizinische Wochenschrift*, and at that time I adopted a very sceptical attitude towards the form of treatment recommended by Niehans, especially the Dry Cell therapy. This conclusion was based on information given to me by several experienced doctors, not only in Switzerland but also in other countries. Furthermore, I was able to make a control study on the basis of an analysis of some repeatedly quoted cases in the literature, as well as by observation of such cases. I came to the conclusions that any possible benefit from the Niehans treatment could be attributed to psychological factors. My answer is as follows: A postulate has been made, namely, that 'treatment predominately psychologically should not be used for the purpose of charging high fees, where simpler methods could be used. Unfortunately in the case of the Fresh Cell therapy this postulate is not fulfilled'.

How thankful we paediatricians would be if we had medicaments of real therapeutic value in the treatment of many endocrine disturbances, of which oligophrenia is one. If Fresh Cell therapy had the value which is claimed, there would be no dispute as to its real effect after all these years. Unfortunately, it would seem that the assessment of success in the treatment of mongolism is rendered difficult by the fact that the disciples of Niehans forbid their patients to use any other therapeutic agents, antibiotics in particular; in other words they forbid their patients to consult the representatives of orthodox or conservative medicine. From time to time I see numerous cases of mongolism from infancy to adolescence. A few of these were treated by the Niehans method, but I could never convince myself of the efficacy of Niehans therapy. Sources which I have consulted, including doctors from whom one should have expected positive information, have not been able to shed any favourable light on the subject. Some of these doctors drew my attention to the damaging effects of Fresh Cell therapy which they had encountered; this could be expected in cases where foreign protein and unsterilized material had been introduced into the body parenterally.

I have taken the trouble to make a careful study of Haubold's article *Nachreifungsbehandlung des Mongolismus und anderer Entwicklungshemmungen* in W. Khun's book *Zellulartherapie in Klinik und Praxis*. Nowhere did I find any proof that the treatment was more efficacious than that attained by orthodox treatment. I have studied the development of numerous mongoloids from the time of birth to adulthood. I discovered that many of these became physically well, developed and progressed mentally to such an extent that they fitted moderately well into the social environment. These patients were not treated along the lines recommended by Niehans, but by methods which were similar, cheaper and harmless.

A teacher at a famous school for mongoloid children assured me that he had not observed any improvement whatsoever in the mental achievement of those mongoloids who had been treated by Niehans' method. He therefore regarded it as his duty strongly to advise parents to avoid the Niehans therapy.

It might be of interest to practitioners if the above were published in the *Journal*.

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12 June 1958

1. Fanconi, G. (1957): Schweiz. Med. Wschr., 87, 1180.